

The Heron Collection:
Antelope Creek and
Miry Creek Sites,
Southwestern Saskatchewan

A Thesis

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in the Department of Archaeology

By

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ABSTRACT

This research involves the analysis of artifacts from two sites in southwestern Saskatchewan with the primary focus on the analysis of precontact/protohistoric pottery. The Antelope Creek site (EeOc-2) is located on the South Saskatchewan River at the mouth of Antelope Creek, and the Miry Creek site (EeOc-5) is approximately 15 km upstream at the mouth of Miry Creek. These artifacts, which are part of the Heron collection, provided a valuable source of information about the regional archaeology of southwestern Saskatchewan. Detailed descriptions and illustrations of each of the Antelope Creek and Miry Creek site vessels will allow for future comparisons between the ceramics from these and other sites.

The Antelope Creek site contains artifacts diagnostic of the Middle Precontact to Historic periods. Pottery consistent with Besant, Avonlea, Old Women's, and Mortlach assemblages has been identified. Bone and lithic tools typical of habitation sites were present, and several unique artifacts including an incised tablet and smoking pipes were also recovered.

The Miry Creek site collection contains Mortlach and Old Women's cultural materials and a sparse quantity of Avonlea, Besant, and Middle Precontact period projectile points. Numerous artifacts relating to the fur trade and homestead eras are also present. AMS dates on food residue from two Mortlach vessels suggest the Mortlach component dates to the Protohistoric period. The presence of fur trade items and metal saw marks on several bone tools supports this designation.

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Chapter 1

Introduction and Environmental Setting

1.1 Introduction

The Antelope Creek (EeOc-2) and Miry Creek (EeOc-5) sites are located in southwestern Saskatchewan on the south shore of Lake Diefenbaker. Lake Diefenbaker is a reservoir on the South Saskatchewan River that was created when the Gardiner Dam was built. The Antelope Creek site is located near the town of Cabri approximately 15 km downstream from the Miry Creek site (Figure 1.1). Both sites are situated at the confluence of creeks with the South Saskatchewan River (Figure 1.2). Seasonal flooding, wind, water erosion, and ice scouring have exposed artifacts on the ground surface making these sites popular areas for artifact collecting.

Ruth and Fulton Heron, avocational archaeologists and charter members of the Saskatchewan Archaeological Society, have regularly visited these sites since the 1970s and have amassed a large collection of artifacts. Their collection is particularly interesting because it includes an abundance of precontact pottery. This is the largest assemblage of pottery to be recorded from the South Saskatchewan River basin in southwestern Saskatchewan. The Heron collection contains a significant number of diagnostic artifacts and is well organized with site provenience recorded for each item. Fulton and Ruth Heron made their collection available for recording and analysis during this research. The Miry Creek and Antelope Creek sites have been subject to collection

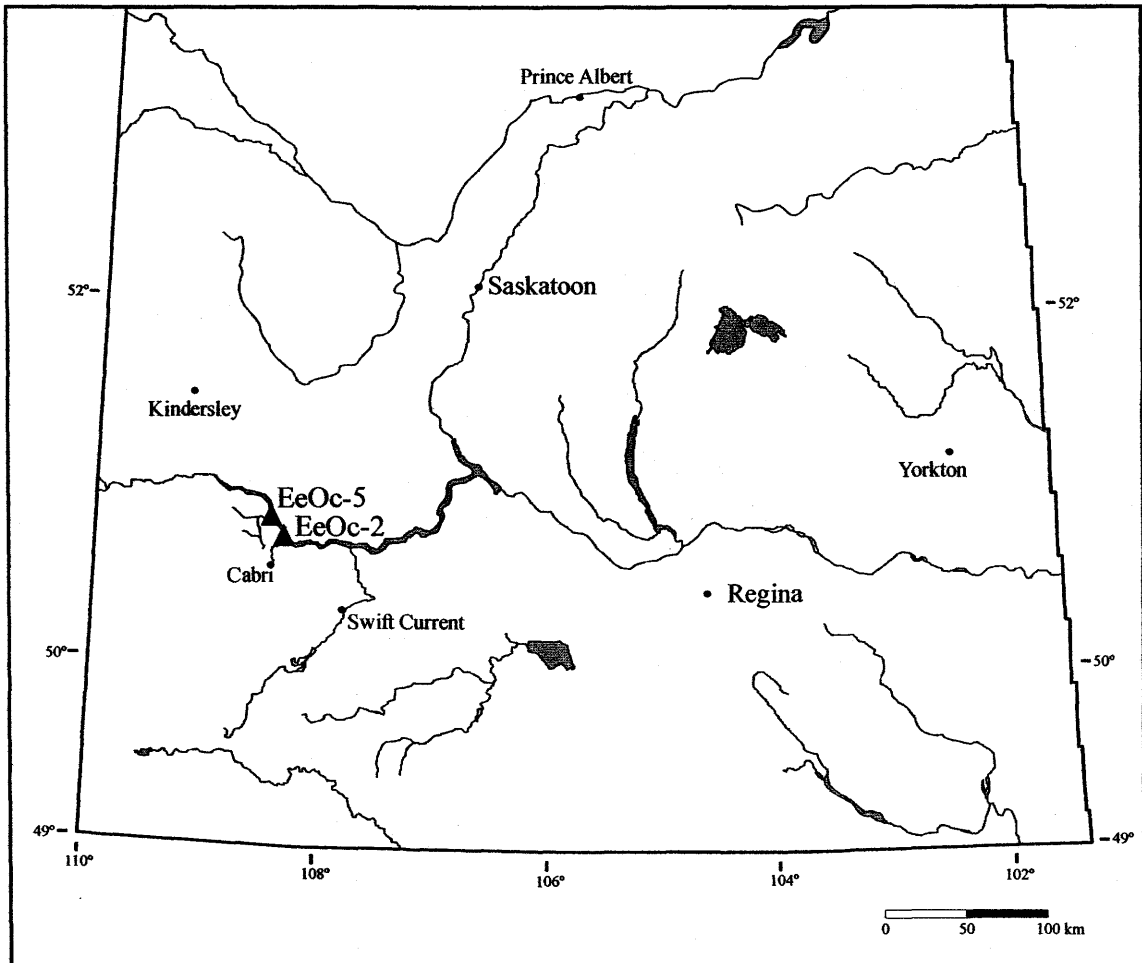


Figure 1.1 Map showing location of the Antelope Creek (EeOc-2) and Miry Creek (EeOc-5) sites in Saskatchewan.

by other individuals (Ruth Heron 2001: personal communication). However, I am unaware of the number of individuals involved and the extent of the collections.

Many regional and site surveys in southwestern Saskatchewan suggest that the area surrounding the South Saskatchewan River is rich in archaeological resources. However, few sites have been excavated, and few collections have been recorded in detail. Large collections like the one belonging to the Herons indicate that the area has sites with significant amounts of Late Precontact period artifacts, but few have been adequately reported.

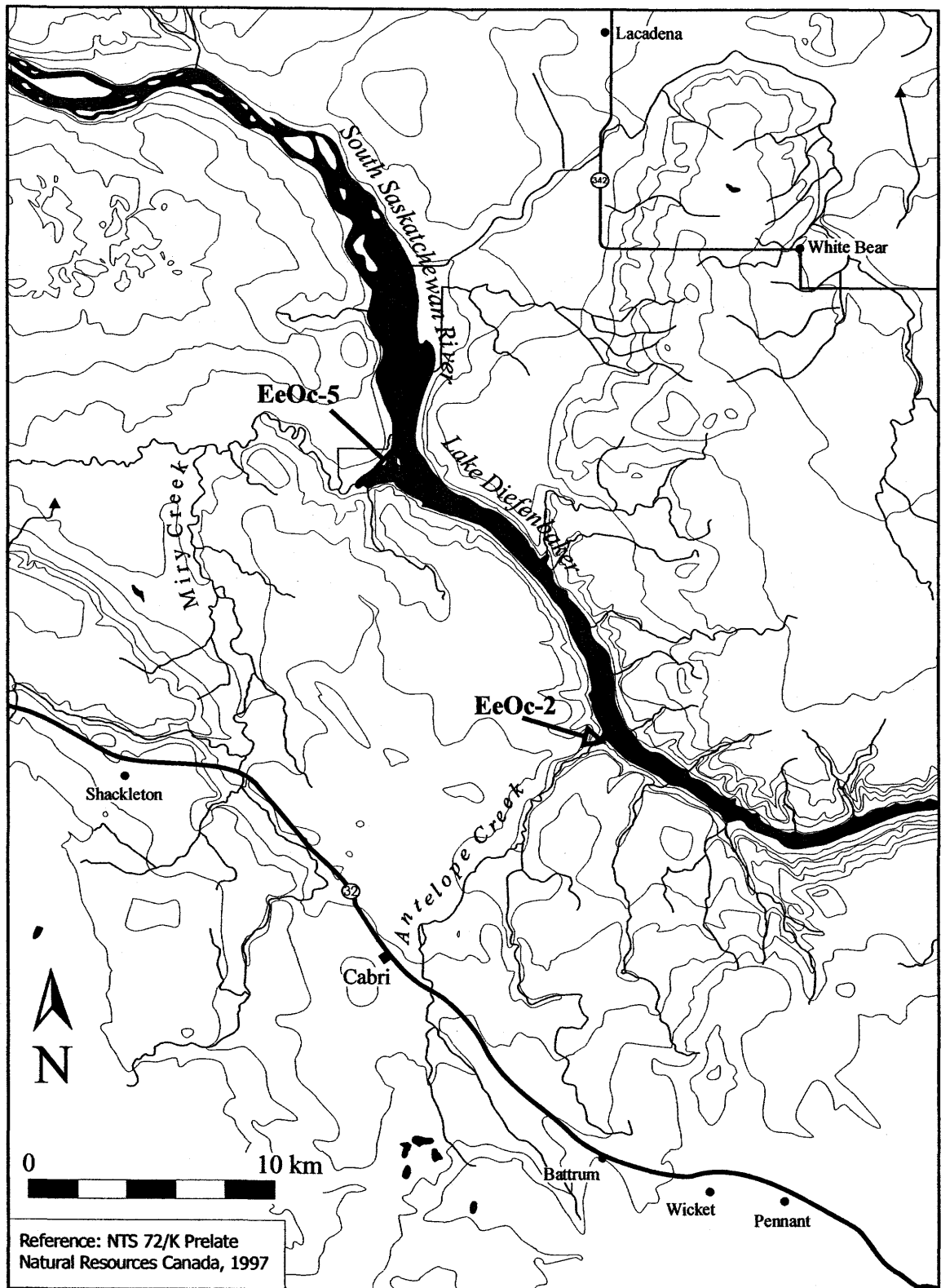


Figure 1.2 Map showing the locations of the Miry Creek (EeOc-5) and Antelope Creek (EeOc-2) sites.

This research emphasizes the importance of working with avocational archaeologists who often have extensive knowledge of the sites in their area and frequently have significant collections that may otherwise go unrecorded. These collections contain valuable information, despite the artifacts being out of context.

1.2 Research Objectives

The aims and objectives of this research are as follows:

- 1) To describe and analyze a large and significant surface collection.
- 2) To present a detailed vessel by vessel description of pottery from two significant sites.
- 3) To contribute to our knowledge of the culture history of southwestern Saskatchewan using diagnostic artifacts.
- 4) To present hypotheses concerning the reasons for the occupation of the Miry Creek and Antelope Creek sites.

1.3 Regional Environment

The Antelope Creek and Miry Creek sites are located in the Eston Plain landscape area of the Mixed Grassland Ecoregion (Acton et al. 1998). The Eston Plain is characterized by gently undulating glaciolacustrine plains dominated by brown clay soils (Acton et al. 1998:162-163). Poorly stabilized sand dunes are common, and areas undisturbed by agriculture are characterized by grasses, with creeping juniper and other shrubs in more stable areas. Trembling aspen is present in areas where the water table is

near the surface, and shrubs dominate the vegetation of the river valleys. A variety of grasses is common in upland areas, with shrubs and trees limited to moist depressions and sheltered areas (Acton et al. 1998:162).

The South Saskatchewan River is the major water course in this area and is the most reliable source of good quality water in the southern half of the province (SaskWater 1999:123). In Saskatchewan, Swift Current Creek is the largest tributary of the South Saskatchewan River. Thorpe (1999:137) notes, "Major valley complexes such as the South Saskatchewan introduce considerable diversity into the landscape. Steep north facing valley slopes can support poplar or ash woodlands even in climates where the uplands are totally treeless. Stream banks may have riparian woods of cottonwood, Manitoba maple, or green ash."

The South Saskatchewan River valley has undergone dramatic change since the creation of Lake Diefenbaker (Pentland 1983; Smith and Wigham 1989; Penner 1993a, 1993b). The reservoir was created by building the Gardiner Dam on the South Saskatchewan River and the Qu'appelle Valley Dam to control the diversion of water into the Qu'appelle River. The dams were built between 1958 and 1968 (Pentland 1983:1). Lake Diefenbaker was first filled between 1964 and 1968 and has been in full operation since 1969. The shores of Lake Diefenbaker are subject to erosion due to wave action and sediment deposition. This has heavily impacted the archaeological resources in the area (Himour 1997). A report on the heritage resources of the South Saskatchewan River basin by the Heritage Branch, Saskatchewan Parks, Recreation and Culture (1989:25) notes, "[O]nce the stabilizing surface vegetation is removed as a result of periodic inundation, heritage sites become increasingly susceptible to various secondary erosional processes such as ice scouring, surface runoff and wind deflation."

The Antelope Creek and Miry Creek sites have been heavily impacted by Lake Diefenbaker, and it is these processes that have exposed artifacts on the ground surface.

1.4 Climate of Area

Using Köppen's classification system, the study area is classified as BSk Midlatitude steppe (Lundqvist 1999:96). The steppe climate is dry year round with cold to warm temperatures (Lundqvist 1999:95). The average annual temperature at the Swift Current weather station is 3.5°C with a range of 31.3°C. The average annual precipitation is 367 mm with 128 cm of snowfall. The coldest month is January and the hottest month is July (Lundqvist 1999:98). The first fall frost occurs around September 15 with the last spring frost around May 19 (Lundqvist 1999:102).

1.5 Fauna

A diversity of wildlife is present in southwestern Saskatchewan. Large mammal species found in the region prior to European settlement included mule deer, antelope, elk, black bear, grizzly bear, bison, and the occasional moose straggler (Wapple 1999). The most common game fish in the Mixed Grassland Ecoregion include northern pike, walleye, yellow perch, and burbot. Goldeye, sauger and lake sturgeon occur in the South Saskatchewan River (Acton et al. 1998:160).

In his travels through the region in 1800, Peter Fidler noted the abundance of elk (red deer), bear, and bison (Johnson 1967). Near Swift Current Creek, just east of the site areas, Fidler noted, "Also great numbers of red deer on the N side, wherever there is

a hummock of small woods under the bank great plenty of the latter animals are to be seen” (Johnson 1967:264). Bison were also numerous in this area prior to their extirpation. On September 19, 1800 Peter Fidler noted, “These last reaches the ground on both sides the river entirely black by buffalo they are so very numerous here” (Johnson 1967:266). The next day Fidler reported, “This is a very great place for buffalo crossing, lay by three hours and killed five and one bear” (Johnson 1967:266). On September 22, 1800 he reported killing another bear (Johnson 1967:267).

1.6 Antelope Creek Site Physical Description

The Antelope Creek site is located on the south bank of the South Saskatchewan River at the mouth of Antelope Creek. It is situated on a large level terrace that now serves as a floodplain for the river. Steep slopes that lead up to the valley crest are found to the southwest. The site is inundated seasonally during high water levels. When water levels are low, artifacts are exposed across an area approximately 800 m long by 200 m wide. During a field visit in the summer of 2001, artifacts and clusters of fire-cracked rock were observed on the eroded terrace and extended to the present shore line of Lake Diefenbaker. A stone circle and two clusters of fire-cracked rock were also identified during an impact assessment of a proposed gravel pit west of the site in 2003 (Novecosky 2003:15-16).

Air photos from 1938 and 1961 indicate that the floodplain and sheltered coulee bottoms were densely vegetated with trees and shrubs, but grasses dominated the terrace (Figure 1.3). These areas are now devoid of vegetation, but native grasses remain on the valley crest and intact portions of the terrace.

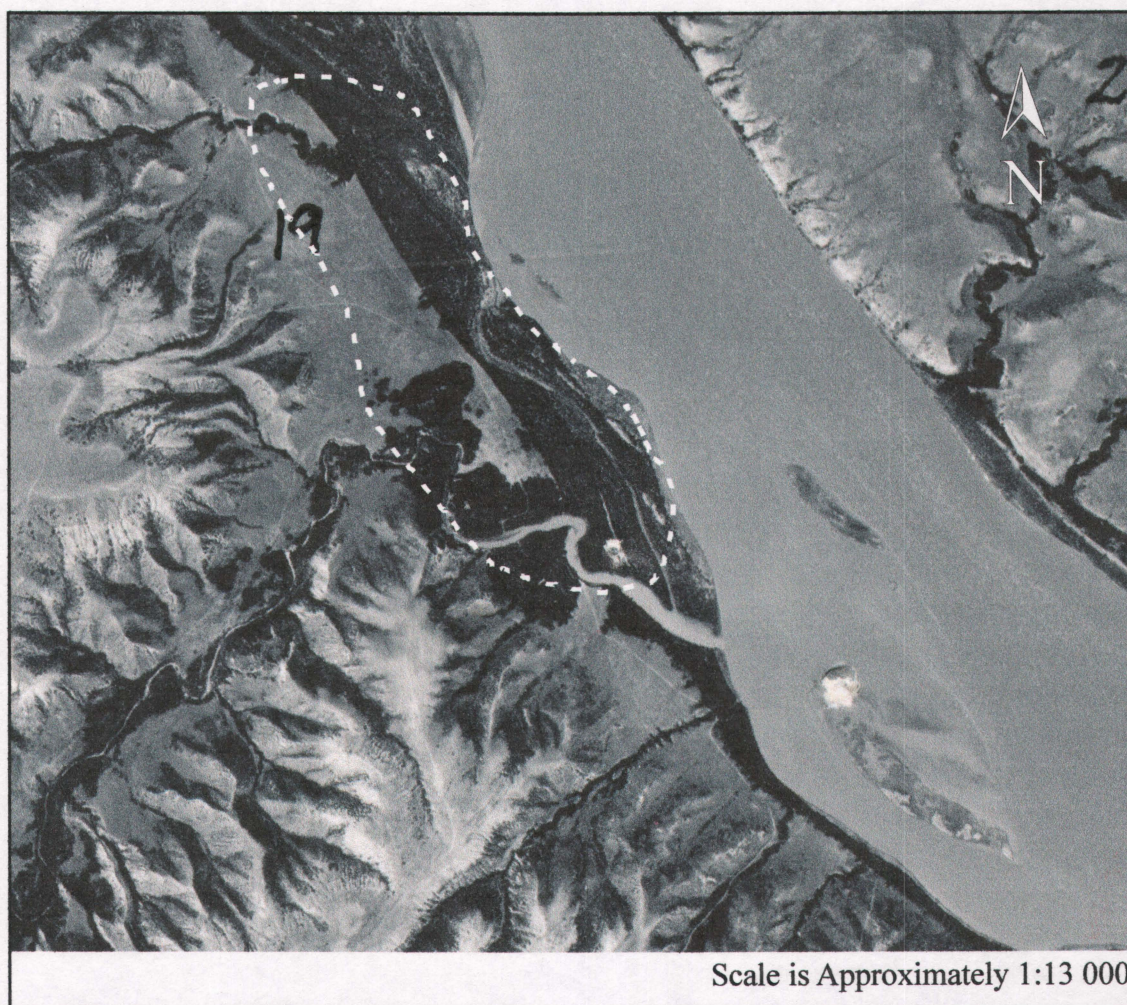


Figure 1.3 Air photo taken in 1961 of the Antelope Creek site before the completion of Gardiner Dam. Dashed area indicates the site area (Dept. of Energy, Mines and Resources, A17353-25).

1.7 Miry Creek Site Physical Description

The Miry Creek site is located along a ridge of sand on the floodplain of the south bank of the South Saskatchewan River at the mouth of Miry Creek, west of the creek channel. During high water levels, the majority of the site is inundated. The river valley is low and broad at this point and the surrounding terrain is characterized by stabilized sand dunes. The 1983 Archaeological Resource Management Section (ARMS) survey of the site conducted by Pat Froese (1984:2) indicated that artifacts at the site were distributed over an area 650 m by 100 m.

The river valley at the mouth of Miry Creek has been heavily impacted by fluctuations in the Lake Diefenbaker water levels and is subject to much water erosion and deposition of sediments (Smith and Wigham 1989:30-34). During test excavations in 1983, Froese noted that the middle of the site may be buried by up to a metre of sand.

Air photos from 1938 and 1958 indicate that portions of the Miry Creek site area were vegetated by trees and shrubs prior to the creation of Lake Diefenbaker (Figure 1.4). The site is now devoid of vegetation, and in the summer of 2001 few artifacts were visible on the ground surface.

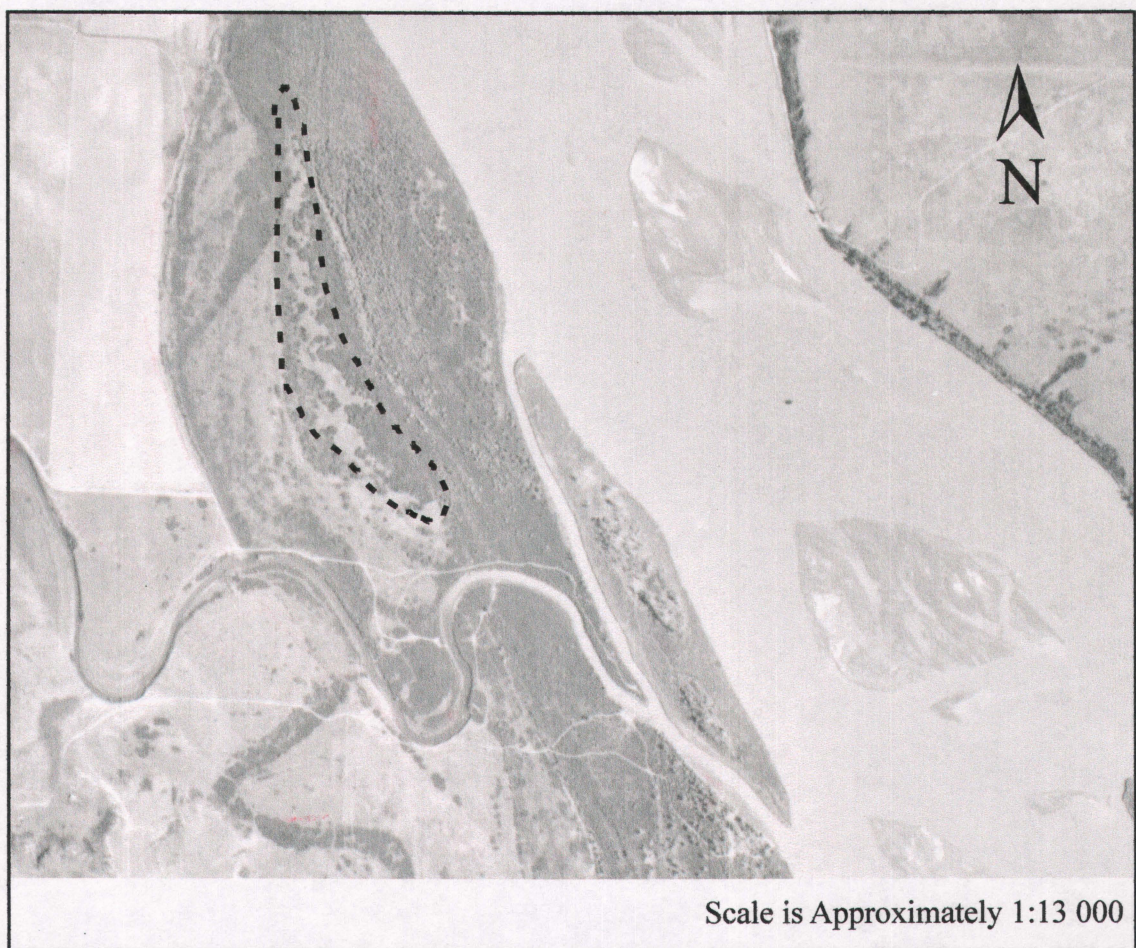


Figure 1.4 Air photo taken in 1958 of the Miry Creek site before the completion of Gardiner Dam. Dashed area indicates the site area (Dept. of Energy, Mines and Resources, A15962-97).

1.8 Summary

Ruth and Fulton Heron have collected from the Antelope Creek and Miry Creek sites since the 1970s. They have amassed a large collection with a significant number of diagnostic artifacts including sherds of many late precontact period ceramic vessels.

Avocational archaeologists often have significant collections that are valuable sources of information about the archaeology of a region, and it is important to record these collections. Collectors are often the ones who inform professional archaeologists about the location of important archaeological sites.

The Antelope Creek and Miry Creek sites are both located at the mouth of large creeks in sheltered areas with available wood and game animals. These areas would have been desirable habitation areas and also possibly good areas for crossing the river. The sites are currently being destroyed by erosion caused by fluctuating water levels of Lake Diefenbaker. Changes in the landscape have severely impacted the archaeological resources of the South Saskatchewan River valley in southwestern Saskatchewan and many important sites have been destroyed.

Chapter 2

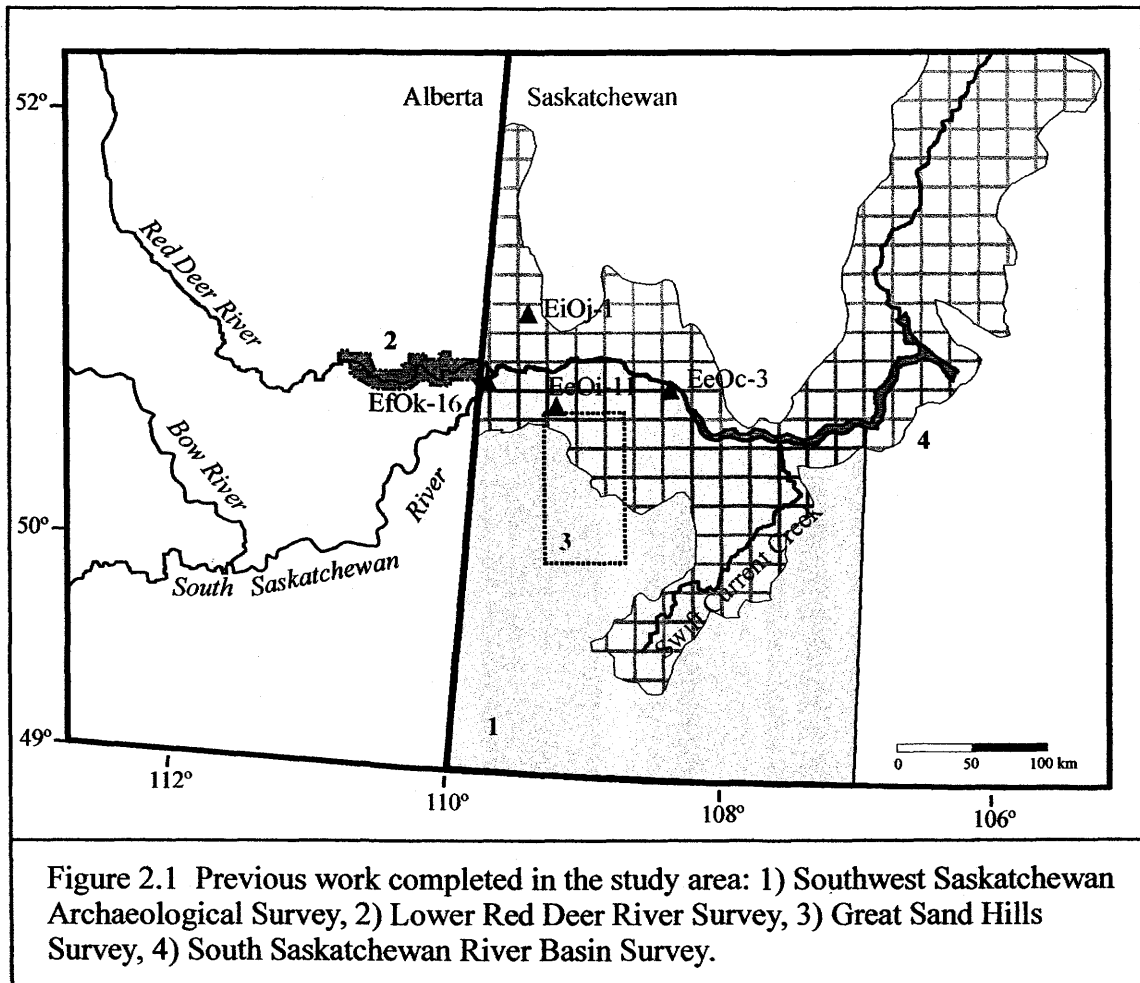
Previous Archaeological Investigations in Southwestern Saskatchewan

2.1 Introduction

Many archaeological investigations have been carried out in southwestern Saskatchewan in the South Saskatchewan River Basin and surrounding areas. The majority of these have been regional surveys along with a few excavations. This chapter summarizes the previous regional surveys of southwestern Saskatchewan and adjacent Alberta west of the elbow of the South Saskatchewan River. In addition, sites with previous excavations between Swift Current Creek and the Alberta/Saskatchewan border are described. Figure 2.1 illustrates the location of these regional surveys and excavated sites. Previous archaeological investigations at the Antelope Creek and Miry Creek sites are also discussed.

2.2 Regional Surveys

Regional surveys record site locations and construct culture historical outlines for the area. They can identify areas where sites are most likely to occur and often describe the potential for loss of archaeological materials. Four large archaeological surveys have been conducted in the vicinity of the site areas (Figure 2.1). These include the Southwest Saskatchewan Archaeological project (Millar et al. 1972), the Lower Red



Deer River survey (Adams 1976), the Great Sand Hills survey (Epp and Johnson 1980), and the South Saskatchewan River Basin study (Heritage Branch, Saskatchewan Parks, Recreation and Culture 1989). Several small cultural resource management projects related to oil and gas developments have also been completed in the South Saskatchewan River basin.

2.2.1 Southwestern Saskatchewan Archaeological Project

This project focused on recording the archaeological resources of the southwest corner of Saskatchewan south of the South Saskatchewan River and west of 107 °30'

west longitude. A 1970 survey of the glacial spillway or channel immediately northwest of Swift Current resulted in the discovery of 73 sites. Areas outside the channel were surveyed in 1971, and an additional seven sites were discovered. Nine more sites were located by surveying roads, ditches and adjacent areas of fields. The survey also involved photographing available local private collections of artifacts and visiting and surveying many of the known sites. The locations of sites were recorded along with the cultural affiliation and classes of artifacts recovered (e.g. flakes, cores, shatter, and bone).

Millar et al. (1972:13) concluded that the southwestern part of the province was extensively occupied during the precontact period. Evidence of Palaeo-Indian occupation was recorded in several parts of the study area, but the main period of utilization appeared to be in the post-Oxbow period, or since 3500 B.P. (Millar et al. 1972:13). They found that large habitation sites were few and were positioned only in what must have been the most favored localities. These seem to be the banks of streams or rivers except the sand hills areas, where sites were located near the shores of large sloughs or lakes. In the Cypress Hills area, they found that sites were mainly adjacent to streams near the edges of hills.

2.2.2 The Lower Red Deer River Survey

In the summer of 1975 the Lower Red Deer River survey was carried out under the direction of Gary Adams (Adams 1976). This survey examined the archaeological resources of an area west of the Antelope Creek and Miry Creek sites, mainly in Alberta. The survey covered a 100 kilometre length of the Red Deer River from the town of

Empress to the mouth of Blood Indian Creek. The Lower Red Deer River survey provided an inventory of sites, and during this time a total of 693 sites were registered (Adams 1976:ii).

During this survey the areas with most intensive occupation were noted and attention was focused on these areas. Bluffs and terraces provided the best habitation potential while floodplains and open prairies had a moderate to poor site density. Identifiable sites in coulees were virtually non-existent. Bluffs, terraces and coulee rims were carefully traversed while floodplains and coulee bottoms were checked periodically (Adams 1976:3).

Adams (1976:105) notes that the Early Precontact period was poorly represented throughout the region and distinguished primarily by isolated surface finds of local collectors. Besant material was abundant and widespread, but had far less imported material than usual in Besant assemblages. The Late Precontact Avonlea phase was poorly represented. Old Women's phase sites were by far the most numerous and associated with every local topographic landform and included every site type (Adams 1976:107).

2.2.3 The Great Sand Hills Survey

The archaeological resources of the Great Sand Hills were discussed by Epp and Johnson (1980) in a report on the Great Sand Hills of Saskatchewan (Epp and Townley-Smith 1980). Epp and Johnson (1980) surveyed 10 representative study blocks measuring 10.36 km² as well as areas outside the study blocks where sites had the

potential to be exposed such as trails, pipelines, and deflated areas. Minor test excavations were also carried out in several locations.

A total of 68 sites were examined in the Great Sand Hills (Epp and Johnson 1980:99). This study revealed that Early Precontact period occupations were scarce in the Great Sand Hills region. A gradual increase during the early Middle Precontact period was noted and the greatest numbers of sites were late Middle and Late Precontact period sites, with the exception of Avonlea which was underrepresented.

2.2.4 South Saskatchewan River Basin Study

A 1989 report prepared by Heritage Branch, Saskatchewan Parks, Recreation and Culture discusses the heritage resources of the South Saskatchewan River Basin. The study identifies where heritage sites are expected to occur within the river basin and to what extent they may be adversely affected by future water resource developments. The report provides a site inventory of the entire South Saskatchewan River Basin and discusses previous excavations and site surveys in the region. It also proposes a predictive site location model with resource sensitivity zones.

This report is useful in preparing a regional inventory because it discusses the sites located within the river basin; however, no new excavations or surveys were carried out. Sensitivity zones were designed and mapped based on the existing site inventory, previous archaeological site surveys and excavations (Heritage Branch, Saskatchewan Parks, Recreation and Culture 1989). The report discusses the number of grassland zone precontact sites by regional/local terrain type and suggests resource sensitivity zones based on biophysical characteristics and a general understanding of

prehistoric settlement patterns (Heritage Branch, Saskatchewan Parks, Recreation and Culture 1989:53). They discuss impact management considerations and recognize the need for field testing to effectively evaluate their predictive model's accuracy and reliability.

2.3 Previously Excavated Sites

Archaeological surveys have revealed that this area is rich in archaeological resources, but few sites in the South Saskatchewan River Basin west of Swift Current Creek have been excavated (Figure 2.1). This section includes a discussion of excavated sites in the South Saskatchewan River basin between the mouths of Swift Current Creek and the Red Deer River.

2.3.1 Sheep Camp Site (EeOc-3)

This bison kill/butchering site is located 4 km northwest of the Miry Creek on the south side of the South Saskatchewan River. Excavations conducted by the South West Saskatchewan Archaeological Society in 1984 resulted in the excavation of four one metre square units and the recovery of Avonlea and Prairie Side-notched projectile points. One radiocarbon date on bone produced a date of 885 ± 195 rcybp (S-n/a) (Cazakoff n.d.:28).

2.3.2 Heron-Eden Site (EeOi-11)

This site, excavated from 1989 to 1992, under the direction of Urve Linnamae, is located 13 km south and 1.6 km east of Prelate, Saskatchewan. It is a Cody Complex bison kill/butchery site. The site dates approximately 9000 rcybp (Corbeil 1995).

2.3.3 Elma Thompson Site (EiOj-1)

This Besant phase tipi ring was excavated in 1981. It is located on the north side of the South Saskatchewan River, 6 km south of Flaxcombe, Saskatchewan. One radiocarbon date of 1675 ± 145 rcybp (S-2202) was obtained (Finnigan and Johnson 1984:32).

2.3.4 Estuary Site (EfOk-16)

This bison pound site is located at the head of a large coulee just below the confluence of the South Saskatchewan and Red Deer Rivers. Old Women's and Avonlea materials were recovered during the 1971-1972 excavations. Level one contained Old Women's materials and yielded radiocarbon dates of 1020 ± 80 (GaK-3809) and 1070 ± 70 rcybp (S-640). Level two contained both Old Women's and Avonlea materials and produced a radiocarbon date of 1190 ± 165 rcybp (S-641) (Adams 1977:38).

2.4 Collections

Artifact collecting is a popular pastime for many individuals in southwestern Saskatchewan, and collectors have informed professional archaeologists about the location of many archaeological sites. Between 1986 and 1989 collections were recorded as part of the Saskatchewan Museum of Natural History's Collection Registration program (Conaty et al. 1989). This program inventoried approximately 870 sites from 130 collections in Saskatchewan, and data from this inventory were used to develop a profile of projectile point distribution in the province. This program also added to the provincial site inventory.

This registry noted a significant distribution of Besant, Avonlea, Prairie Side-notched, and Plains Side-notched points west of the elbow of the South Saskatchewan River to the Alberta border (Conaty et al. 1989:38-41).

2.5 Previous Archaeological Investigations at the Antelope Creek Site

The Antelope Creek site (EeOc-2) was observed in 1971 by Henry Epp as part of the Southwestern Saskatchewan Archaeological project (Millar et al. 1972). At this time three Besant projectile points were collected, and pottery fragments were observed. The points along with several pieces of debitage are in storage in the Department of Archaeology at the University of Saskatchewan. During Epp's 1971 survey, it was noted that the site was being destroyed by wind and water erosion, and it was recommended that further testing be carried out before the June rise in water level and prior to further destruction of the site. No additional work has been carried out despite

the fact that this site has produced many significant and unique artifacts and is currently being destroyed.

During a field visit in the summer of 2001 as part of this research, several flakes were observed on the ground surface and bison bone was eroding from the bank. Although most of the site is severely eroded, it is possible that intact areas remain at the base of the hills. Future investigations may reveal intact areas of the site.

Fulton and Ruth Heron have been collecting from the Antelope Creek site for several decades and have amassed a very large collection. Fulton Heron is listed as the informant on the 1971 Archaeological Site Survey Form, Department of Anthropology and Archaeology, University of Saskatchewan. The Heron collection was recorded as part of the Collections Registry Program of the Saskatchewan Museum of Natural History (now Royal Saskatchewan Museum).

The only known published references to Antelope Creek artifacts are the three Besant projectile points mentioned above (Millar et al. 1972) and a description of an incised tablet (Jones 1997). This thesis is the first to discuss the entire Antelope Creek site assemblage from the Heron collection.

2.6 Previous Archaeological Investigations at the Miry Creek Site

The Miry Creek site (EeOc-5) has been well known for many years, and a significant amount of archaeological investigations have been carried out at this site. The vast majority of the artifacts recovered from the site have been collected by Fulton and Ruth Heron. The Herons have been collecting artifacts from the Miry Creek site for

three decades, and their collection was recorded as part of the 1986 to 1989 Collections Registry Program (Conaty et al. 1989).

Ian Brace visited the site in June, 1982, and noted several features including four hearths and three “chokecherry dumps.” Ceramics were recorded and he noted that the most northerly hearth was associated with lithic debitage. It was also noted that the site was subject to extreme wind and wave action, and recommendations were made that the site be recorded, mapped, and excavated as soon as possible (EeOc-5, SARR 1982).

In May, 1983 Patricia Froese and two staff members from the Archaeological Resource Management Section (ARMS) spent several days conducting investigations at the site. During this time, the area was surveyed and mapped, and a small number of artifacts were collected. These artifacts are in storage with the Heritage Branch in Regina, Saskatchewan. Table 2.1 lists the artifacts collected from the Miry Creek site during this investigation. No diagnostic artifacts or formed tools were collected.

Forty-one activity areas were recorded and mapped. Faunal remains were observed in every activity area. Fire-cracked rock was observed in 75% (n=31) of the activity areas, and features which may be hearths were present in 25% (n=10) of the activity area. Pottery sherds were observed in 30% (n=12) of the activity areas, and some small concentrations of debitage that may represent knapping areas were also recorded (Froese 1984:2). Appendix A lists the artifacts observed in each of the activity areas, and Figure 2.2 illustrates the spatial distribution of features at the Miry Creek site. Froese (1984:2) notes, “The identifiable faunal remains are predominantly bison and most, if not all, skeletal elements are present. A number show butchering marks and many are just fragments. There are also several bones from large and small mammals

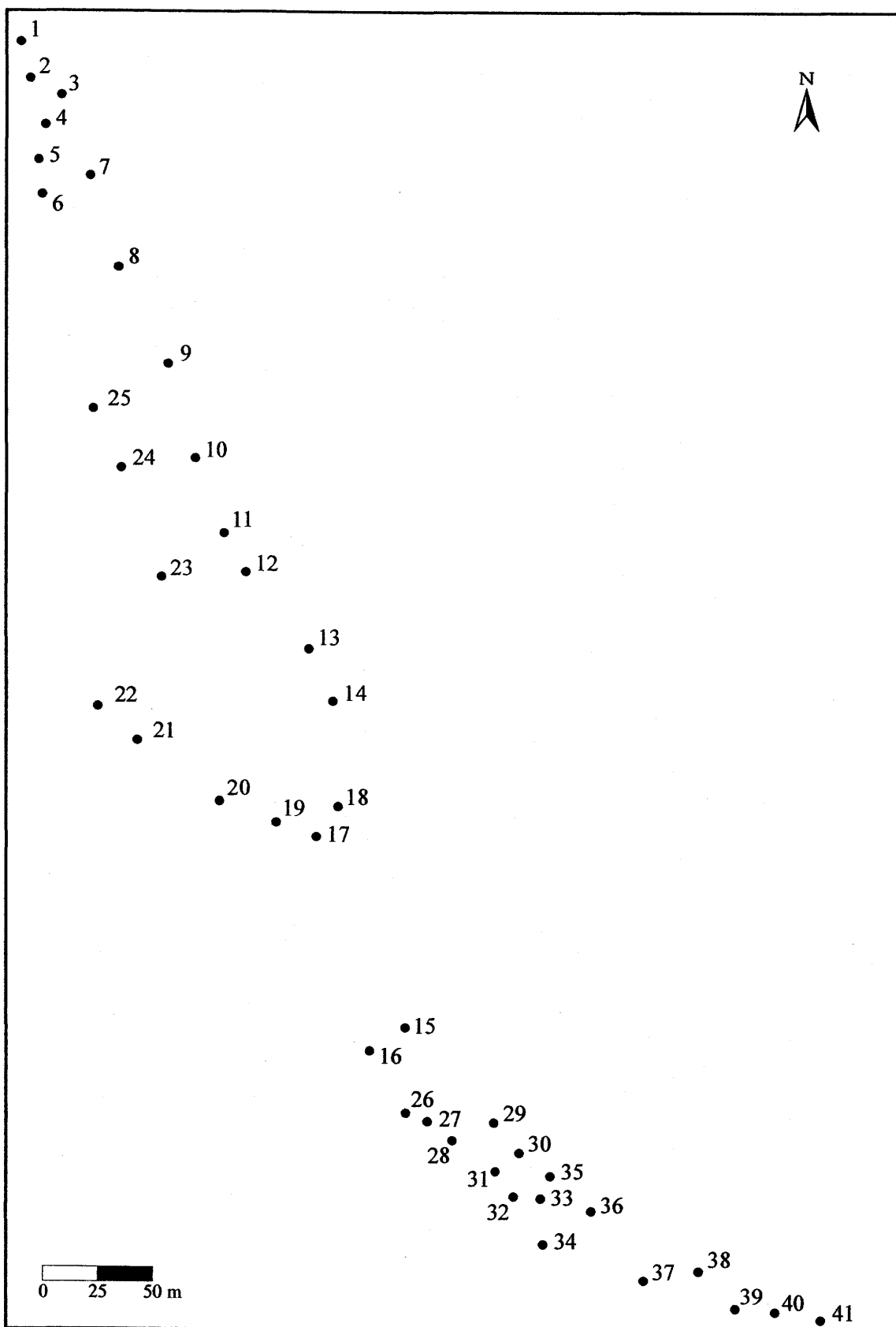


Figure 2.2. Miry Creek site activity areas (adapted from records on file with the Heritage Resources Unit, Culture, Youth and Recreation).

Table 2.1 Artifacts collected during 1983 ARMS investigation

area #	bone frags	tooth frags	charcoal	flakes	debitage	pottery sherds	FCR (g)	identifiable bone
5	76	9	3	3	0	0	463.6	1 distal metapodial (bison) 1 proximal radius (bison) 2 skull fragments (bison)
18	25	3	0	1	0	6	51.2	
38	931	9	0	11	1	36	3198	1 distal humerus (bison) 2 bird bones 1 distal humerus (ground squirrel?) 1 small mammal claw 1 distal femur (ground squirrel?) 1 small rodent sacrum 1 small rodent bone 1 distal tibia (weasel?) 3 mollusc shells 3 fish bones 1 long bone (mouse?) 1 mandible (mouse?) 3 rodent long bones 3 rodent mandibles 1 rodent tooth

(deer? canid? beaver? rodents?), birds and fish and some mollusc shell, but these items could be intrusive into the archaeological component.”

One radiocarbon date was obtained following the completion of the ARMS investigations at the Miry Creek site. A charcoal sample from activity area 34, feature

#1 was obtained. The feature, which is identified as a trash pit or possible hearth, was associated with an extensive scatter of bone fragments, debitage and sherds eroding from a paleosol (1984 Memorandum on file with Heritage Resources Unit). The sample was collected from an excavated feature on June 2, 1984 and produced a radiocarbon date of 335 ± 70 rcybp (S-2568).

No publication resulted from this work. Patricia Froese presented a paper in March 1984 to the Swift Current Archaeological Society on her work at the Miry Creek site. A copy of this is on file with the Heritage Resources Unit of the Government of Saskatchewan.

Archaeological literature refers to the Miry Creek site on several occasions, and selected artifacts have been discussed. Mary Malainey (1991) included 20 vessels from the Miry Creek site in her discussion of Saskatchewan Plains pottery. These vessels are identified as Mortlach. However, Malainey examined only a small sample of the pottery from the Miry Creek site, and since that time an additional 114 vessels have been made available for analysis.

Walde et al. (1995) refer to the Miry Creek site as containing a Cluny component. However, none of the artifacts were discussed and the criteria for the classification of this component as Cluny were not indicated. Tom Stevenson (2001) discusses several Miry Creek site artifacts from the Heron and Clifford Plant collections. These bone artifacts are identified as parts of a ring and pin game.

The Miry Creek site has long been recognized as a large site that has produced a significant amount of cultural material. Despite this, no detailed reporting or analysis of artifacts has ever been completed. This thesis is the first to analyze and report on the entire Miry Creek assemblage from the Heron collection.

2.7 Summary

The Antelope Creek and Miry Creek sites are located in an area of southwestern Saskatchewan that is rich in archaeological resources. Many archaeological surveys have been carried out in southwestern Saskatchewan and are useful in identifying the locations of sites and establishing a general culture history of the region. They identify areas where sites are most likely to occur and discuss the potential for loss of archaeological resources. Despite the numerous surveys, few sites have been excavated and few collections of artifacts have been analyzed in any detail.

Previous work at the Antelope Creek and Miry Creek sites has indicated they are significant and in need of further study. This research will document and provide a detailed description of the Heron collection from the Antelope Creek and Miry Creek sites, with the primary focus on the precontact ceramics. This will provide insight into the function and the temporal extent of the sites as well as a discussion of how the precontact ceramics fit into existing typologies previously established for the Northern Plains.

Chapter 3

Culture Historical Overview

3.1 Introduction

The archaeological record of southwestern Saskatchewan has been divided into three distinct periods (Walker 1999). These include the Early Precontact, Middle Precontact, and Late Precontact periods. The Early Precontact period on the Northern Plains radiocarbon dates between 11 300 and 7500 rcybp (Walker 1999:25). Cultural materials diagnostic of the Early Precontact period have not been identified in the Heron's Miry Creek and Antelope Creek site collection.

The Middle precontact period marks the transition from the use of spear points to side or corner-notched atlatl dart points. Middle Precontact period radiocarbon dates range between 7500 to 1850 rcybp (Walker 1999:25-26). Several projectile points diagnostic of the Middle Precontact period were collected from the Antelope Creek and Miry Creek sites. Early Side-notched, Oxbow, Duncan, Hanna, and Pelican Lake points have been identified in the Heron's Antelope Creek and Miry Creek site collection.

The vast majority of the diagnostic artifacts present in the Heron's Miry Creek and Antelope Creek site collection can be assigned to the Late Precontact period. The Late Precontact period in southwestern Saskatchewan began approximately 2000 rcybp with the Besant phase and lasted until the time of European contact approximately 170 BP (Dyck 1983:135; Walker 1999:27). During the Late Precontact period ceramics

were manufactured, and a reliance on bow and arrow technology is evident. Regional surveys and other archaeological investigations have indicated that the Late Precontact period is well represented in southwestern Saskatchewan. The remainder of this chapter discusses the archaeological taxonomy and diagnostic artifacts of the Late Precontact to Historic periods in southwestern Saskatchewan.

3.2 Besant Phase

The term “Besant” was first used to describe one of the major cultures at the Mortlach site (Wettlaufer 1955:39). Besant phase radiocarbon dates in southern Saskatchewan range between 2000 and 1150 BP (Dyck 1983: 113; Walker 1999:26). There is overlap between Besant and Avonlea dates, but in Saskatchewan Besant components are consistently found below Avonlea indicating that the Besant occupations are earlier than Avonlea (Morlan 1993:40).

Besant components are usually identified on the basis of projectile points. Dyck (1983:115) provides a useful description of Besant projectile points:

The Besant tool kit is characterized by lanceolate Side-notched projectile points that are predominantly straight based but sometimes the base is slightly convex or slightly concave. Notches are generally twice as broad as they are wide and are situated so that one edge of the notch is slightly above or even touching the basal edge.

During the Besant phase, the use of both atlatl dart tips and arrow points is evident. According to Reeves (1983:94), Besant and Samantha Side-notched are the characteristic notched point types with Samantha replacing Besant through time. The Samantha Side-notched point is an arrow point identical in shape but smaller than the Besant atlatl dart point (Duke 1991:87). The argument for the introduction of the bow

and arrow late into the Besant phase has been challenged by Dyck and Morlan (1995) based on excavations at the Sjovold site in Saskatchewan. From these excavations they named, defined and chronologically positioned three main point types for the Besant series. These are the Outlook Side-notched, Sandy Creek and Bratton points. The oldest Besant points at the Sjovold site appeared to be arrow points. This goes against previous findings that the bow and arrow made a late transitional appearance (Dyck and Morlan 1995:537).

It is during the Besant phase that pottery first appears in southwestern Saskatchewan. Besant vessels are conoidal with grit and sand temper and were likely manufactured using the paddle and anvil technique. The most common surface treatment is cord roughening but vessels may also exhibit smooth exteriors. The most common decorative element is a single row of punctates parallel to the rim (Dyck 1983:120). Bosses are also a common decorative element. Neuman (1975:93) describes vessels with alternating punctates from the exterior and interior (bosses) occurring at the Sonota sites.

Materials from Sonota sites in North and South Dakota are similar to Besant materials in Saskatchewan. The only distinguishing characteristic between Besant and Sonota is the presence of burial mounds in the Sonota sites of North and South Dakota and their absence at Besant sites (Dyck and Morlan 2001:125; Dyck 1983:114-115; Walde et al. 1995:17).

The association of ceramics with Besant points on the Canadian Plains was once debated. Byrne (1973:449) noted there was not one single example of the undoubted association of pottery in a Besant phase occupation in the Plains area north of the Missouri Coteau. As more archaeological investigations have been completed it has

been accepted that Besant phase ceramics are present in Saskatchewan. Meyer and Rollans (1990) provide examples of many sites in Saskatchewan with Besant ceramics including the Ratigan site (DhMs-10), Crane site (DiMv-93), Bennet site, and the Mudrick Springs site. Other Saskatchewan occurrences of ceramics in a Besant component have been noted at the Walter Felt site (Kehoe 1964), the Garratt site (Morgan 1979), and the Long Creek site (Bryant 2002).

3.3 Avonlea Phase

The Avonlea phase is named after the Avonlea site in Saskatchewan (Wettlaufer and Mayer-Oakes 1960; Kehoe and McCorquodale 1961a, 1961b). Radiocarbon dates for the Avonlea phase in southern Saskatchewan range between 1800 and 1150 BP (Walker 1999:26). Bow and arrow technology was present during earlier phases, but it is during Avonlea times that people appear to have relied almost exclusively on the bow and arrow (Dyck and Morlan 2001:125).

The Avonlea point is a small side-notched arrow point characterized by its thinness and symmetry. Kehoe and McCorquodale (1961a, 1961b) first described the Avonlea point as a horizon marker for the Canadian Plains:

The most distinguishing feature of the Avonlea point is its delicate aspect, produced by the thinness of the blank struck off for the point. Flaking of the Avonlea points is extraordinarily well executed contributing to the delicacy of the projectile point. Flake scars are very broad and shallow, usually parallel extending from the edge of the point to the midpoint or beyond. Tiny lumps and hinge fractures may occur on the poorer materials employed...Small, shallow but fairly wide side notches are placed extremely low on the blade of Avonlea points. The edges of the triangular blade are very regular and frequently exhibit fine serration. The base may be wider, equal to or narrower than the proximal end of the base...Usually the corners of the base are rounded, rather than sharp since

the bases are preponderantly concave, small ears are typical (Kehoe and McCorquodale 1961a:184).

At the time when Avonlea projectile points were first recovered from the Avonlea site the phase was thought to be aceramic (Kehoe and McCorquodale 1961b:139). Since then, the association of ceramics with Avonlea points at the Avonlea site has been confirmed (Klimko and Hanna 1988), and pottery has been discovered in association with Avonlea points at many sites.

There is variation in Avonlea ceramics across the northern plains. Avonlea vessels may be conoidal or bag shaped. There have also been occurrences of Avonlea vessels with complex profiles (Quigg 1988b). The vessels are grit tempered with a variety of exterior surface treatments including net impressed (Morgan 1979, Quigg 1988a), parallel grooved (Klimko and Hanna 1988; Johnson 1988) and plain. Johnson (1988:139) notes that many Avonlea vessels do not have any decoration and, when vessels are decorated, motifs and decorative techniques are very limited.

Southern Saskatchewan sites with Avonlea components include Garratt (Morgan 1979), EgNp-15 (Himour 1997), Avonlea (Kehoe and McCorquodale 1961a, 1961b; Hanna 1986), Gull Lake (Kehoe 1973), Long Creek (Wettlaufer and Mayer-Oakes 1960; Bryant 2002), and Sjovold (Dyck and Morlan 1995).

3.4 Old Women's Phase

The term "Old Women's phase" is derived from the Old Women's Buffalo Jump in southwestern Alberta (Forbis 1962). The Old Women's phase began approximately A.D. 800 and lasted until A.D. 1750 (Meyer 1988; Walde et al. 1995). The occurrence of Old Women's materials and historic materials together at sites such as layer two of

Head-Smashed-In indicates that the Old Women's phase lasted at least until the Protohistoric period (Reeves 1978:157).

In 1983 Reeves defined the Old Women's phase, focusing on lithic technology:

Old Woman's [sic] Phase is characterized by ceramics, emphasizes local plains or Montana lithics to large measure, and has a technology characterized by the extensive use of split pebble techniques to produce blanks for endscrapers, points, pièces esquillées, and burin like spalls. There is also extensive use made of petrified wood. Projectile point styles are microstylistically discrete, particularly those representative of prehistoric times (Washita) (Reeves 1980:88 in Reeves 1983:19).

Old Women's phase sites contain both Prairie and Plains Side-notched projectile points. Prairie Side-notched points exhibit a side-notch that is very close to and often touching the basal edge (Dyck 1983:129). Dyck (1983:130) notes Prairie and Plains points are both triangular, but exhibit several principal differences: (1) the notches on the Plains type are always well removed from the basal edge giving the point a very sharp triangular outline; and (2) the flakes removed during manufacture of Plains points seem smaller and more regular than those of Prairie points.

Meyer (1988) has proposed that the Old Women's phase should be divided into an Early Old Women's phase dating from A.D. 800-1300 and a Late Old Women's phase dating from A.D. 1300-1750. From A.D. 800-1300 Prairie Side-notched projectile points predominated, but by A.D.1300 Plains Side-notched projectile points appeared in Old Women's assemblages (Meyer 1988:57). This type of division has also been postulated by Reeves (1983:20) based on projectile point variation. The ceramics do not appear to have changed much throughout the history of the Old Women's phase, although some decorative attributes from neighbouring assemblages were adopted (Meyer 1988:57). Early Old Women's phase materials are distributed across the

Northern Plains, but Late Old Women's phase sites occur primarily in Alberta and west central Saskatchewan (Meyer 1988:60).

In 1973 Byrne proposed ceramic complexes that were "used to refine and expand the local sequence of phases first defined by lithics" (Byrne 1973:i). Ceramics now commonly referred to as Old Women's were assigned to the Late Variant of the Saskatchewan Basin Complex. Byrne (1973:331-335, 355-356) provided a detailed description of this pottery type, "The texture of the paste runs from quite compact to very blocky, the bulk of the materials showing some coarseness as a result of laminations or variable bonding. Temper particles run from very small in size...to excessively gross, measuring up to 15 mm across" (Byrne 1973:332). Most of the vessels have a cord marked or fabric impressed exterior surface. One-third of these vessels appear to have had no post-paddling treatment. Another one-third were smoothed to the point where the surface texture was obliterated, and the remaining one-third have been polished or scraped to remove some of the surface finish, although the original surface finish is still visible (Byrne 1973:333). Meyer (1988:56) has subsequently noted that a minority of the vessels are completely smooth (plain).

Old Women's vessels are thick walled (6-15mm) with globular bodies. The bases are usually rounded but occasionally flattened. The vessels frequently have pronounced shoulders which reflect internal and external thickening in the vicinity of the ridge. The necks, when present, are generally shallow and short. Byrne (1973:334) notes "The lips are generally flat and frequently thickened, usually oriented in the horizontal plane but somewhat everted". The decoration on these vessels is variable and many vessels are undecorated. Punctuation is the most common technique but cord wrapped tool impressing and incising are also used (Byrne 1973:334). The motifs are

“fairly simple in appearance and restricted in area” (Byrne 1973:335). The decorations occur on the lip and/or lip edge, just below the lip, the neck, and the crest of a shoulder ridge (Byrne 1973:335). Old Women’s vessels were modeled by the paddle and anvil technique (Gregg 1985:133). It is now common to see this type of coarse, thick pottery referred to as Old Women’s phase pottery (Meyer, 1988; Green 1993; St Cyr 1993; Paquin 1995; Walde et al. 1995).

Meyer (1988) has combined Reeves’ (1983) and Byrne’s (1973) descriptions of the Old Women’s artifact assemblages in his description of the Old Women’s phase. Brumley and Dau (1988:51) have restricted the definition of the “Old Women’s Complex” to “sites/components characterized by Prairie/Plains Side-notched projectile points in association with Byrne’s (1973) Saskatchewan Basin complex ceramics.”

Many sites in Saskatchewan have yielded Old Women’s pottery including the Garratt site (Morgan 1979), Gull Lake site (Kehoe 1973), Tipperary Creek site (Green 1993), Tschetter site (Prentice 1983), Lucky Strike site (Wilson 1984), Estuary site (Adams 1977), Sherwin Campbell site (Paquin 1995), and DkNv-15 (St Cyr 1993).

3.5 Mortlach Phase

The term Mortlach was introduced into the archaeological literature by Boyd Wettlaufer (1955) when he identified the Mortlach Culture as the latest prehistoric occupation of the Sandy Creek valley. Based on absolute dates from several sites, Mortlach dates from about 1500 A.D. to the beginning of the direct contact period (Walde 1994:106).

Mortlach assemblages are characterized by the presence of Plains Side-notched projectile points and well made ceramics with a variety of attributes. Ice gliders and slot knife handles are often present at Mortlach sites, and a high percentage of fused shale and Knife River Flint artifacts are present in the artifact assemblages of many southern Saskatchewan Mortlach sites (Walde 1994).

It was at the Mortlach site in southern Saskatchewan that Wettlaufer (1955:20) recovered quantities of distinctive pottery he identified as "Mortlach Check-Stamped." This pottery is grit tempered with a coarse and laminated texture. The rims were usually dentate stamped while some exhibited a series of punctates near the top and plain topped rims may have a diagonal dentate pattern around the upper exterior of the rim (Wettlaufer 1955:21) The exterior of the pottery bears check stamping. The checks are 2-3 mm in size and probably applied with a grooved paddle (Wettlaufer 1955:21). The shoulders may have no decoration or a pinch or fingernail pattern. The rims are flattened and somewhat rolled inward (Wettlaufer 1955:21). The vessel form is round bottomed with a pronounced shoulder and incurving rim. They are relatively small - 20-25 cm in diameter - and may be quite shallow (Wettlaufer 1955:21).

Since this time, many sites that contain Mortlach pottery have been identified, and the definition of Mortlach has been expanded to include many varieties other than check stamped vessels. Malainey's thesis (1991) described the characteristics of Late Precontact period pottery, and Walde's (1994) dissertation was a study of the Mortlach phase. While differing in many respects both of these studies demonstrated that Mortlach pottery assemblages are variable and are represented by several different vessel forms, surface finishes and decorative attributes. Walde's (1994:101) definition of the Mortlach phase concludes:

Mortlach sites everywhere are characterized by assemblages of relatively thin and compact earthenware pottery formed and decorated in a wide variety of manners. Four major vessel profiles (Vertical, Angled rim, S-Rim, and Wedge Rim) are usually present. Exterior surfaces may be roughened with impressions from paddles wrapped with cord or fabric or incised with diamond shaped or square shapes to produce checkstamped surfaces or surfaces may have a smoothed finish which hides the type of paddle used to form the vessel. Tools used to form decorations include dentate stamps, cord wrapped objects, quills, solid tools, pointed tools, and fingers. Vessels frequently show evidence of quartering marks which, when viewed from the top divide the pot into quartered circles. The ceramic assemblages everywhere are extremely heterogeneous with vessel forms, exterior surface finishes, and approaches to decoration mixing freely.

Southern Saskatchewan sites with Mortlach ceramics include the Mortlach site (Wettlaufer 1955), Long Creek site (Wettlaufer and Mayer-Oakes 1960; Bryant 2002), Walter Felt site, Sanderson site, Stoney Beach site, Lake Midden site, and many other small sites discussed by Walde (1994) and Malainey (1991).

3.6 Cluny Phase

The type site for the Cluny phase is Cluny, the remains of a fortified village that lies on the north bank of the Bow River, Alberta within the confines of the Blackfoot Indian reserve (Forbis 1977:1). Cluny finds its closest parallels with sites along the Missouri River in the Dakotas not only in respect of the fortification and the pits enclosed within it but also in pottery and in a number of tool types (Forbis 1977:12). Forbis (1977:12) considers Cluny to be a very Late Precontact or Protohistoric site, dating to approximately A.D. 1740. The Protohistoric period refers to the time when European goods were being used but sustained contact had not yet been established. Pottery vessels from Cluny reveal a high frequency of check stamping and dentate

stamping, both of which appear late in Middle Missouri villages (Forbis 1977:16).

These attributes are also common in Mortlach assemblages.

There is much debate about the relationship between Mortlach and Cluny. Some archaeologists believe that Cluny and Mortlach materials should be assigned to separate archaeological phases while others believe they are the same. Byrne (1973:431) claims that a close examination of the full range of available materials indicates that there is a close relationship between the Cluny Complex of southern Alberta and the Saskatchewan Mortlach materials. Syms (1977:127) suggests that the shared traits of Cluny and Mortlach ceramic assemblages demonstrate that they represent the same or closely related groups. Walde (1994:104) and Walde and Meyer (2003:145) suggest that any relationship between Cluny and Mortlach is due more to derivation from a common Woodland ceramic tradition than to more recent relationships. They have observed that in comparison with Mortlach pottery, Cluny ceramics tend to have less compact, more laminated paste. The Cluny vessels overall seem to be less well constructed than Mortlach vessels, and while dentate stamped and cord-wrapped tool impressed decorations are present in both cases, the tools used in decorating Cluny pots tended to be larger and less well constructed (Walde 1994:104; Walde and Meyer 2003:145-146). Differences in the pottery and lithic raw material used to manufacture projectile points suggest to Walde (1994:104) that there is no close relationship between Cluny and Mortlach, and that Cluny pottery can be differentiated from Mortlach vessels on the basis of the size of tool impressions on the pottery. As yet, there is little evidence to support this argument, but recording and comparing such attributes may prove useful as more pottery analyses are completed. Further investigation of Late Precontact to contact period sites is required before classification of these as distinct phases can be done.

3.7 Historic Period in Southwestern Saskatchewan

The Historic period in southwestern Saskatchewan began around A.D. 1800 when Europeans initiated sustained contact with the Aboriginal inhabitants of the area. The first fur trader to record venturing into southwestern Saskatchewan was Peter Fidler who traveled west on the South Saskatchewan River. In 1800, Peter Fidler established Chesterfield House at the confluence of the Red Deer and South Saskatchewan Rivers (Johnson 1967). Traders from the XY Company also arrived at this time and set up a post at the same location.

This was likely not the first time that most of the Aboriginal occupants of southwestern Saskatchewan had contact with Europeans or their goods. They would have traveled to trade with traders, but Chesterfield House is the first post established in southwestern Saskatchewan and marks the beginning of the direct contact period. European traders had ventured farther west into Alberta at earlier times but apparently had not traveled down the South Saskatchewan River until 1800. Dempsey (2001:607) notes that after 1730 the Blackfoot had begun to acquire horses, and by 1754 when they were visited by Anthony Henday they were familiar with axes, knives, and kettles and had a completely equestrian lifestyle.

Fidler's journals provide detailed observations of the landscape and wildlife in the area prior to European settlement. Near Miry Creek Peter Fidler noted the presence of "mud houses" on the south side of the river:

A little below in this reach 3 mud houses on this side amongst a few Poplars, they are of a circular form about 9 feet diameter and 4 1/2 feet high, they appear to be nearly 20 years old, they are said to have been built by a small war party from the Mis sis soury river, who live in these kinds of habitations (Hudson's Bay Company/Provincial Archives of Manitoba E.3/2, p.71. Journals of Exploration 1769-1822).

The precise location of these structures has not been determined, but based on Fidler's description of the landscape they are near Miry Creek. Attempts in 1974 by William Byrne to locate remains of these structures were unsuccessful (O'Brien 1975). If these remains were present, changes in the landscape (i.e. Lake Diefenbaker) have probably destroyed all evidence of them.

Fidler's journals also provide some details about the ethnicity of the Aboriginal inhabitants of the area and about those who traded at Chesterfield House at the beginning of the nineteenth century. Fidler reports regular trading with Blackfoot, Blood, Fall (Gros Ventre), and Muddy River (Piegan) Indians (Johnson 1967). Southwestern Saskatchewan was within the range of several ethnic groups at the beginning of the contact period including the Gros Ventre (Russell 1991; Fowler and Flannery 2001), Nakota (Assiniboine) (Ray 1974; Walde 1994), and Blackfoot (Dempsey 2001). While these groups were the main inhabitants of the area other groups would certainly have ventured into the area.

The territories of Aboriginal groups changed throughout the protohistoric and historic periods (see Russell and Meyer 1999:21). The Gros Ventre were present in southwestern Saskatchewan in the mid eighteenth century (Russell and Meyer 1999:21). By the mid nineteenth century they had moved south into northern Montana (Fowler and Flannery 2001:677). In the late seventeenth century Nakota territory extended westward from Lake Winnipeg into central Saskatchewan, and in the mid nineteenth century Nakota territory stretched east to west from Wood Mountains to the Cypress Hills and north to south from the North Saskatchewan River to the Milk and Missouri Rivers (DeMallie and Miller 2001:572). Walde (1994) has argued that the Mortlach phase represents the ancestors of Nakota people. In the early historic period the Blackfoot

territory was primarily in present day Alberta. It extended southward from the North Saskatchewan River to the Milk River (Dempsey 2001:604), but they also made use of the Saskatchewan Grasslands. Kennedy (2000:13) notes that the Blood and other Blackfoot groups entered and used the Western portion of the Cypress Hills with some frequency during the 1850s, and they also moved between the Saskatchewan and Missouri forts for trade or war. The Plains Cree moved into southwestern Saskatchewan in historic times. By the 1870s some groups of Plains Cree were wintering near the Cypress Hills and along Swift Current Creek (Kennedy 2000:7). By the 1860s the Hudson's Bay Company was relying upon Métis hunters and independent traders to collect buffalo robes in southern Saskatchewan. The Métis were an extremely significant element in the buffalo robe and provisions trade of the northern plains (Kennedy 2000:18). The Métis were already established in the Cypress Hills by 1871 and set up a post at Chimney Coulee, just north of the present day town of Eastend (Kennedy 2000:18).

The buffalo robe/whiskey trade of the 1860s and 1870s is an important part of the history of southwestern Saskatchewan (see Kennedy 1997). American traders had a strong presence in southwestern Saskatchewan and dominated the trade (Kennedy 1997:35). The robe trade created competition for resources, and this led to changing territory. The territory of aboriginal groups involved in the trade was not concrete and people often moved for horse stealing, intertribal warfare, kinship obligation and trade (Kennedy 1997:13-17). The buffalo robe trade in southwestern Saskatchewan ended in the late 1870s when the buffalo were extirpated from the Canadian plains (Kennedy 1997:47).

Ranching began in the Cabri district at the end of the nineteenth and beginning of the early twentieth centuries. One of the first ranches was established in 1896 by Bill Kirkaldie (Widdifield and Widdifield 1984:14). A ranch was established at the mouth of the Miry Creek by George Smith, an American who later moved back to Montana. Bill Brunyee's Place was a ranch located at the mouth of Antelope Coulee (Widdifield and Widdifield 1984:14-15). Many other ranches and homesteads were established in southwestern Saskatchewan in the early 1900s.

3.8 Summary

The Late Precontact period is well represented at archaeological sites in southwestern Saskatchewan. This period, which began approximately 2000 years ago, includes technological innovations such as the bow and arrow and pottery production. The cultural phases of southwestern Saskatchewan are recognized by diagnostic artifacts including projectile points and pottery, each with characteristic attributes. Radiocarbon dates and the stratigraphic position of diagnostic artifacts have allowed a cultural chronology to be constructed for the Late Precontact period in southwestern Saskatchewan.

Chapter 4

Methods and Terminology

4.1 Introduction

One of the primary goals of this thesis is to describe and analyse a large and significant collection of artifacts from a private collection. This collection contains a significant amount of pottery and the describing of this will allow future comparisons to be made between the ceramics from these and other sites. The primary focus is the analysis of pottery, but other artifacts are briefly discussed to provide an inventory of the Heron collection. Fire cracked rock, unmodified faunal remains, and lithic debitage were rarely collected, and the few pieces that are present in the collection are not representative of the entire site assemblage; therefore, only formed tools are considered in this analysis. The results of the artifact analysis are summarized in chapters 5 and 6, and descriptions and illustrations of the vessels are presented in Appendices B and C.

4.2 Pottery Analysis

Vessels are identified and numbered on the basis of rim sherds, and many vessels are represented by a single rim sherd. Sherds are considered as belonging to the same vessel if they are conjoinable or if they share enough attributes that they can confidently be assigned to the same vessel number. If doubt exists then they are assigned a different vessel number. Therefore, it is possible that the vessel count is an over-representation of

the actual number of vessels collected because there is often some variation in the style, paste quality, and other attributes of an individual vessel. Sherds other than rims that cannot be assigned a vessel number are described as miscellaneous sherds, and description is limited to the surface treatment and decorative elements.

A number of attributes were considered including paste texture, temper, vessel form, decorative technique, placement of decoration, and exterior surface treatment. Other features such as the presence of carbonized residue are also recorded. These attributes are commonly discussed in analyses of northern plains pottery (e.g. Walde 1994; Malainey 1991, 1995). Similar methods are followed here so that comparisons can be made between ceramics from these and other sites.

The vessels from the Antelope Creek and Miry Creek sites are compared to vessels from other sites and assigned to an archaeological entity based on the attributes they possess. This, combined with other diagnostic artifacts such as projectile points, permits the construction of a cultural chronology for the sites. Following is a terminology used to describe the attributes that were considered when analysing the vessels.

4.2.1 Paste Texture

Several terms are used to describe the paste texture of vessels. The texture may vary from one portion of the vessel to another so more than one term is often applied: Blocky – following Byrne (1973:39), “[W]hen broken the edge of the sherd appears to be extremely irregular, with numerous humps and hollows indicating where clumps or blocks of fired clay have broken off.”

Compact – no evidence of layering or porosity in the clay “[T]he broken edge of the sherd tends to be straight and clean with no evidence of blockiness or lamination” (Byrne 1973:30).

Exfoliated – clay comes off in scales or layers.

Friable – easily crumbled.

Laminated – evidence of layering or splitting within and running parallel to the vessel wall.

4.2.2 Temper

A description of the temper according to its type, size and quantity is included in each vessel description. The Antelope Creek and Miry Creek site vessels contain sand and/or grit (crushed rock) temper. The grains are measured to record the range in particle size, and the quantity is recorded as sparse, medium, or heavy:

Sparse – temper represents less than 10% of the paste.

Medium – temper represents 10-40% of the paste.

Heavy – temper represents more than 40% of the paste.

4.2.3 Vessel Form

Conoidal and globular vessel forms are present in this collection. Conoidal vessels are vertical rimmed vessels that taper towards the base (Figure 4.1). These vessels lack a distinct neck or shoulder. Globular vessels have a more complex profile

with constricted necks and pronounced shoulder areas that may be rounded or angular (Figure 4.1).

The pottery assemblage contains five distinct rim profiles (Figure 4.2). In some cases it is difficult to assign a vessel profile with certainty because many vessels are identified by a single rim sherd. If the profile cannot be determined it is identified as unassignable. Each rim profile is described below:

Angled – the exterior of these rims have a sharp angle between the lip and the neck of the vessel. The interior of the vessel rim is concave and also exhibits an angle. To identify a vessel as an angled rim profile a portion of the rim angle must be present.

Excurvate – the rims of excurvate vessels are out-flaring. To be identified as excurvate, the rim and a portion of the neck must be present.

S-Rim – vessels with this rim profile have a gently sloping, rounded rim angle between the lip and the neck. The exterior of the vessel is convex with a concave interior. To be identified as an S-Rim there must be a portion of the rim that exhibits a convex exterior surface.

Vertical – vessels with vertical rim profiles have flat exterior rim surfaces and flat to slightly concave rim interiors. The rims have a vertical orientation. In order for a vessel to be assigned to this profile there must be at least the upper portion of the neck area present.

Wedge – vessels with wedge profiles exhibit a sharp rim angle between the lip and the neck of the vessel exterior. Walde (1994:28) notes that the “external and internal surfaces above the angle tend to be straight and converging to the lip in profile.”

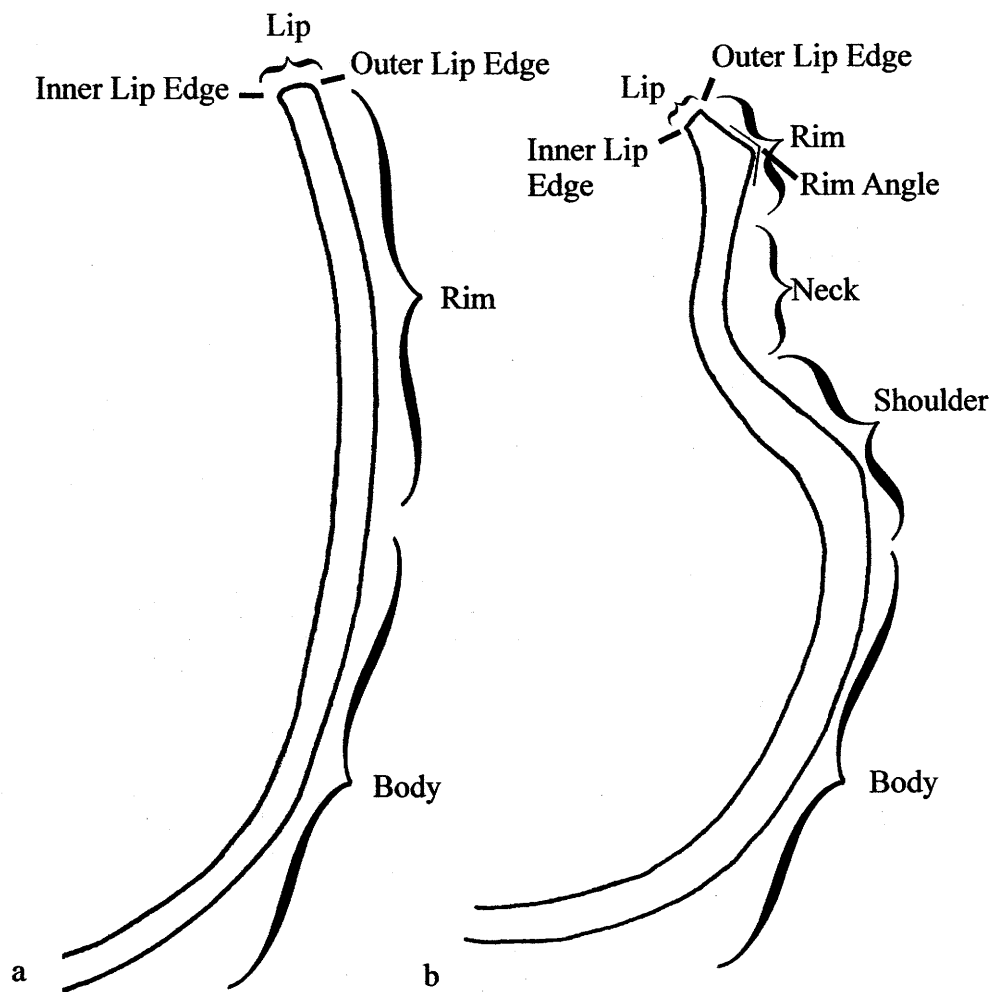


Figure 4.1 Vessel profiles showing fields of decoration: a) conoidal; b) globular.

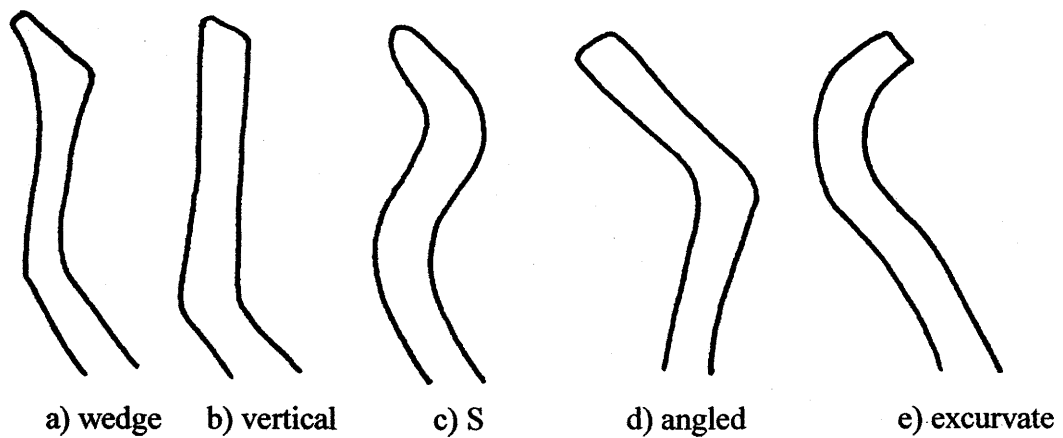


Figure 4.2 Rim profile forms.

The exterior angle on the wedge rim vessels is closer to the lip surface than angled rim vessels, and the interior of the rim does not exhibit a sharp angle.

Lip shape is recorded following Malainey's (1991:53-55) terminology. Each vessel is described and the profile illustrated in Appendices B and C.

Where possible, the vessel orifice was measured using a best fit method. This involves comparing the interior of the vessel to a set of concentric circles with known circumferences. The interior of the vessel rim is placed against these circles until the curve which best fits the size of the vessel is found.

4.2.4 Decoration

Decoration is discussed in terms of the type of decoration present, its orientation and placement on the vessel, size, and its association with other attributes. The areas of the vessel that are decorated (fields of decoration) are also described. These include inner lip edge, outer lip edge, lip surface, rim, rim angle, neck, and shoulder (see Figure 4.1). The terms used to describe the orientation of the decoration include left oblique, right oblique, horizontal and vertical.

The types of decoration present on the vessels in this collection are as follows:
Boss – a circular mound on the exterior of the vessel created by pressing an object into the interior of the vessel.

Broad-edged tool (BET) – a wide tool is impressed into the clay.

Cord wrapped tool (CWT) – cord is wrapped around an object such as a stick or another cord and impressed into the vessel.

Dentate – a notched tool is impressed into the surface of the clay leaving square or rectangular impressions.

Drilled hole – a circular hole made by drilling through the vessel wall. It can be made when the vessel is wet or dry. If the vessel is wet, there will be some unevenness and clay protruding around the edges of the hole. If made when dry, no protruding clay is present and evidence of grinding is present.

Finger impressions – the tip of a finger is impressed into the clay leaving a slight depression.

Fingernail – the fingernail is impressed into the vessel leaving a crescent shaped depression.

Incised – a pointed object is pulled through the wet clay leaving sharp lines in the clay.

Notch – a U or V-shaped indentation on the corner or angle of a vessel.

Pinches – clay is pinched between the fingers creating mounds of clay.

Pokemarks – a series of tiny punctates created by pressing thin objects into the clay.

Punctates – a punctate is defined as having a depth greater than its width and is typically as wide as it is long (Lenius and Olinyk 1990:112). Punctates may be formed by impressing the clay with either a solid tool or a hollow object such as a cut bird's quill or reed.

Quartering – quartering refers to the placement of equally spaced decorative elements that divide a vessel into quadrants.

Round-edged tool – the round edge of a cylindrical object is pressed into the clay leaving a trough-like expression.

Sharp-edged tool (SET) – a very narrow tool is impressed into the clay.

Stamps – stamps have a depth which is less than the width and are usually longer than they are wide (Lenius and Olinyk 1990:112). Ovoid, rectangular, circular and teardrop shaped stamps are all present in this collection.

4.2.5 Exterior Surface Treatment

Exterior surface treatment is another characteristic useful in the classification of pottery. The following terms describe the exterior surface treatments present in this collection.

Check Stamped – square, rectangular or diamond shapes are pressed into the surface using a paddle that is incised with a pattern.

Cord Roughened – these vessels bear a series of parallel cord impressions that are created by pressing a cord wrapped paddle onto the exterior of the vessel. On several basal sherds the orientation of the cord varies indicating the orientation of the paddle was changed.

Fabric Impressed – a woven textile was impressed on the exterior surface of the vessel (Malainey 1991:56).

Indeterminate – sherds with very small portions of exterior surface, exfoliated exteriors, or where a surface treatment is visible but the type cannot be distinguished are classified as indeterminate.

Obliterated – the vessel has been decorated or smoothed to the point that the underlying surface treatment is no longer discernible.

Parallel Grooved – a term used to refer to an exterior surface treatment on Avonlea pottery that is characterized by, “equidistant linear lines and intervening troughs which encircle the vessel and cover the entire exterior” (Johnson 1988:137).

Simple Stamped – the exterior of the vessel bears a series of grooves and ridges that are created by impressing the wet clay with a paddle that is incised with parallel lines.

4.2.6 Pottery Classification

Ceramics from the Late Precontact period exhibit traits that are considered characteristic of particular archaeological phases. Many of the vessels in this collection are typical of these archaeological phases; however, not all vessels are easy to classify because of the commonality of many of these attributes between some phases. This is particularly evident with some of the Mortlach and Old Women’s ceramics from the Antelope Creek and Miry Creek sites.

Most of the vessels from the Antelope Creek and Miry Creek sites are identified as either Old Women’s or Mortlach ceramics. These vessels are classified according to the commonly accepted definitions of these assemblages as discussed in Chapter Three. Comparisons of the traits of these ceramic assemblages indicate that many traits are shared and many of the differentiating characteristics are subjective.

Old Women’s vessels are often characterized as coarse and thick while Mortlach vessels are thin and compact. However, there is considerable overlap of the range of thickness between Mortlach and Old Women’s vessels, and examination of the paste texture of Mortlach vessels indicates that not all are compact. Byrne (1973:334)

describes vessel thickness of Saskatchewan Basin Ceramics-late variant (Old Women's) as ranging from 6 to 15 mm. The lip thickness of Saamis site Old Women's vessels ranges from 7 to 19 mm and rims measure between 4 and 14 mm thick (Milne Brumley 1978:113-125). The thickness of Mortlach vessels is also variable. Bryant (2002:243-300) provides measurements of the thickness of vessels from the Long Creek site. Lip thickness ranges from 3.8 to 14.9 mm, and rims from 4.9 to 10.2 mm thick. Thickness alone does not serve to differentiate between Old Women's and Mortlach ceramics.

Mortlach ceramics are also characterized by the compactness of the paste (Walde 1994:101). Malainey (1991:380-388) discusses the paste textures of several southern Saskatchewan Mortlach assemblages and considerable variation is noted. Many laminated vessels were present in the Lake Midden, Walter Felt, Stoney Beach and Gilmore assemblages. Although the thinnest, most compact vessels are undoubtedly Mortlach, not all Mortlach vessels are compact.

Many other attributes are present in both Old Women's and Mortlach assemblages. The surface finishes of Mortlach and Old Women's vessels are often similar. There are examples of cord roughened, fabric impressed, and smooth exteriors in both Mortlach and Old Women's assemblages. The vessel forms of Old Women's and Mortlach assemblages also share many similarities and are usually characterized by complex vessels forms. The rims of Old Women's vessels are typically vertical or excurve, but these rim forms are also present in Mortlach assemblages.

Ceramics from Old Women's and Mortlach assemblages share several decorative techniques such as the placement of decoration and the tools used to form the decoration. Old Women's vessels are generally sparsely decorated, and undecorated vessels are common. Mortlach vessels may also be undecorated, sparsely decorated, or

elaborately decorated. Common decorative elements on Old Women's vessels include CWT impressions, punctates, and incising which are also present on Mortlach vessels. Dentate impressions are common in Mortlach assemblages, but also appear in some Old Women's assemblages. Dentate impressing is present at the Ross site in Alberta (Vickers 1989), and several of the vessels from the Antelope Creek and Miry Creek sites that bear dentate impressions are identified as Old Women's vessels.

As the above discussion indicates, there are some similarities between vessels from Old Women's and Mortlach assemblages. But there are also striking differences in the typical vessels. Certain vessels can positively be identified as belonging to one phase or another if they display typical characteristics or combinations of attributes that are exclusive to one phase or another. Other vessels are classified based on subjective criteria such as quality of manufacture. Many of the vessels in the Heron collection are represented by small sherds, adding to the difficulty of classification. All vessels from the Heron collection are assigned to an archaeological phase but some of the divisions are based on subjective criteria and may not accurately reflect distinct archaeological phases.

4.3 Other Artifacts

Although the primary focus is on pottery it is also important to describe the entire collection. Diagnostic artifacts provide additional information about the culture history of the site, and the types of tools that are present allow for interpretations of the activities being carried out at the site. The other artifacts are recorded on the basis of tool type and material type. The remaining diagnostic artifacts are used to add to the

culture historical outline of the sites, and other artifacts help to determine the types of activities carried out at the site. Brief descriptions and illustrations of the other artifacts are included in Chapters 5 and 6.

4.4 Dating Methods

The age of the sites is determined based on the diagnostic artifacts including the projectile points and ceramic attributes. These are compared to artifacts from other sites including many that have been dated using absolute dating methods. Two absolute dates were obtained from the Miry Creek site on carbonized food residue from the interior of two vessels. Samples of this residue were submitted to Beta Analytic for AMS analysis. The results are discussed in Chapter 6.

4.5 Summary

The methods employed to describe and analyze the Heron collection follow definitions and attributes that are commonly utilized on the Northern Plains. This will allow comparisons to be drawn between previously analyzed Late Precontact assemblages and the Antelope Creek and Miry Creek sites. The results of the analysis will be summarized in Chapters 5 and 6 and a vessel by vessel description will be included in Appendices B and C. Attributes that are characteristic of a particular cultural phase are recognized and used to assign many of the vessels to a cultural entity, thereby reconstructing the culture history of the sites. While the primary focus is on the

analysis of pottery the other artifacts will be briefly described to provide an inventory of the site assemblage and insight into the activities at the site.

Chapter 5

Antelope Creek Site Artifact Analysis

5.1 Introduction

The Antelope Creek site (EeOc-2) is a multi-component site from which thousands of artifacts, including pottery, lithic and bone tools, and historic materials have been collected. The primary focus of this thesis is the description and analysis of pottery, but other artifacts are briefly described based on their form and material type. Lithic debitage, fire cracked rock, and unmodified faunal remains were rarely collected and because of the unrepresentative sample are not included in the artifact analysis.

The artifacts recovered from the Antelope Creek site provide insight into the types of activities undertaken there even though specific activity areas cannot be identified because of the lack of context and association. In addition, a culture history of the site can be derived from diagnostic artifacts including the projectile points and pottery.

5.2 Pottery

Seventy-eight vessels are identified on the basis of rim sherds. An additional 515 miscellaneous sherds present in the Heron collection could not be assigned to particular vessels. Description of these miscellaneous sherds is limited to a discussion

of the surface finish and decorative elements. The attributes of the sherds identified as vessels are summarized in this chapter, and detailed descriptions and illustrations of each vessel is provided in Appendix B. Vessels characteristic of Besant, Avonlea, Old Women's and Mortlach ceramic assemblages have been identified from the Antelope Creek site.

5.2.1 Besant Phase

One Besant vessel was identified. Vessel 1 is a conoidal vessel with vertical cord roughening on the exterior surface that extends onto the flat lip surface. The rim is decorated with a boss. A fingernail impression on the left side of the boss appears to have resulted from pinching clay between the fingers. The paste is relatively compact with a medium amount of sand and grit temper particles.

This vessel has a form and style typical of Besant vessels. It is similar to vessels from the Sonota sites of the Dakotas (Neuman 1975) and Saskatchewan Besant sites including the Garratt site (Morgan 1979) and Walter Felt site (Kehoe 1964).

5.2.2 Avonlea Phase

Vessels 2 to 4 are characteristic of Avonlea parallel grooved vessels. These sherds represent conoidal vessels with undecorated, square lip profiles and exterior surfaces that bear parallel grooves. The paste texture ranges from compact to laminated and contains sparse to medium quantities of grit temper particles.

Other Saskatchewan sites with similar parallel grooved vessels include the Avonlea site (Hanna 1986, Klimko and Hanna 1988), the Garratt site (Morgan 1979), EgNp-15 (Himour 1997), and the Sjøvold site (Dyck and Morlan 1995).

5.2.3 Old Women's Phase

Many of the Antelope Creek site vessels (n=25) exhibit characteristics that are typical of Old Women's ceramic assemblages. The main distinguishing feature is the coarseness and thickness of the sherds. Vessel form, exterior surface treatment, and decorative elements are also typical of Old Women's ceramic assemblages as described in Chapter 3.

Vessels 5-29 are identified as Old Women's vessels. These sherds are relatively thick and coarse. The profiles of 60.0% (n=15) of the Old Women's vessels are unassignable. The remaining 40.0% (n=10) have vertical rim profiles with shallow necks. The lip surfaces are often flat and thickened, but several are rounded. Many of the lips have expanding surfaces.

The most common exterior surface treatment of the Old Women's vessels is vertical cord roughening which is present on 60.0% (n=15) of the exterior surfaces. The exterior surface finish of 24.0% (n=6) is indeterminate. Smoothing obliterated the underlying surface treatment on 8.0% (n=2) of the vessels, and 8.0% (n=2) bear fabric impression.

Decoration is present on 40.0% (n=10) of the vessels, and the remaining 60% (n=15) are undecorated. Five vessels are decorated on the outer lip edge, and five are decorated on the lip surface. Lip surface decoration includes CWT impressions (n=3),

punctates (n=1), and dentate impressions (n=1). Outer lip edge decoration includes SET impressions (n=2), notches (n=1), finger impressions (n=1), and round edged tool impressions (n=1). One vessel (#29) with outer lip edge decoration may also be decorated on the rim. The rim bears a trace of an impression that appears to have been created by smoothing a fingertip across the rim.

The necks are undecorated. None of the Old Women's vessels has been reconstructed as far as the shoulder so nothing can be said about the shoulder form or the presence or absence of shoulder decoration on these vessels. Two coarse, angled shoulder sherds that could not be assigned to a particular vessel bear decoration. One is decorated with triangular notches and one with finger pinches.

Similarities exist between many of the Old Women's phase vessels from the Antelope Creek site and the Saamis site in Medicine Hat, Alberta (Milne Brumley 1978). Many of the vessels from the Saamis site are coarse, thick, and sparsely decorated with decoration limited to the outer lip edges. There are also similarities between Antelope Creek and Garratt site (Morgan 1979) ceramics. The Garratt site ceramics from levels 1 and 2 are commonly vertically cord roughened with thickened and flattened lips. Lip or shoulder placement of decoration is predominant. A difference between the site assemblages is the absence of lip edge decoration on Garratt site ceramics (Morgan 1979), but the surface finish, form and textures are similar.

The coarse, thick, undecorated and sparsely decorated Antelope Creek site vessels share similarities to vessels from other Saskatchewan Old Women's phase sites including the Tschetter site (Prentice 1983), the Tipperary Creek pot (Green 1993) and the Piché pot from near Ponteix in southwest Saskatchewan (St Cyr 1993).

5.2.4 Mortlach Phase

Forty-nine of the vessels from the Antelope Creek site display attributes consistent with Mortlach ceramic assemblages. The primary distinguishing attributes are the thinness and quality of the vessels combined with decorative elements and vessel forms consistent with Mortlach ceramic assemblages as described by Walde (1994). Vessels 30-78 have been identified as Mortlach vessels. These vessels are relatively thin, and most are compact with sparse to heavy quantities of sand and/or grit temper particles. Several vessels that are slightly laminated are still classified as Mortlach vessels because they are thinner than typical Old Women's vessels and they display decorative attributes typical of Mortlach ceramics.

Vertical cord roughening is present on 46.9% (n=23) of the exterior surfaces of the Antelope Creek sherds identified as Mortlach vessels. Smoothing obliterated the underlying surface treatment on 28.6% (n=14) of the exterior surfaces. Fabric impression is present on 14.3% (n=7) of the exterior surfaces, and 6.1% (n=3) of the exterior surface treatments are indeterminate. Check stamping is present on 4.1% (n=2) of the exterior surfaces.

The rim profiles of 71.4% (n=35) of the vessels are unassignable. Other rim forms include vertical rim profiles, 22.4% (n=11), S rim profiles, 4.1% (n=2), and wedge profiles, 2.0% (n=1).

Most of the vessels are sparsely decorated. Decoration is present on 77.6% (n=38) of the vessels and 22.4% (n=11) are undecorated. Only seven vessels are decorated on more than one surface. Lip surface decoration is present on 22 of the vessels. Decorative elements include stamps (n=7), dentate impressions (n=5), incising

(n=3), round edged tool impressions (n=2), finger impressions (n=1), CWT (n=1), BET (n=1), punctates (n=1), and SET (n=1). Twelve of the vessels bear decoration on the outer lip edges. Notches are present on eight of the decorated outer lip edges. Other decorative elements include finger pinches (n=2), fingernail impressions (n=1), and CWT (n=1). The inner lip edges of eight of the Mortlach vessels are decorated. Decorative elements include notches (n=4), CWT (n=2), quartering (n=1), and notches combined with quartering (n=1). The rims of five of the Antelope Creek site Mortlach vessels are decorated. Decorative elements include dentate impressions (n=2), incising combined with punctates (n=1), punctates (n=1), and CWT impressions (n=1).

The frequency of elaborately decorated vessels seen at the Antelope Creek site is similar to other Mortlach sites in southern Saskatchewan. Malainey (1991:239) notes that in southern Saskatchewan a few vessels are highly decorated, but in most cases decoration is limited to the lip surface and just below the lip. The frequency of wedge profiles seen in the Antelope Creek site ceramic assemblage, however, is dissimilar to other typical southern Saskatchewan Mortlach assemblages. Wedge profile vessels are common at many Mortlach sites (Malainey 1991:239), but only one of the Antelope Creek vessels has a wedge rim profile. It is of interest to note that this frequency of profiles is similar to Malainey's (1991, 1995) observations of Wascana ware which is the pottery associated with the Moose Jaw culture.

5.2.5 Miscellaneous Sherds

There are 515 pottery sherds from the Antelope Creek site that cannot be assigned to a particular vessel number and are identified as miscellaneous sherds. Most

of these (n=493) are undecorated. The exterior surfaces of 25.2% (n=124) of the undecorated miscellaneous sherds are exfoliated. Smoothing obliterated the underlying surface treatment on 24.9% (n=123) of the sherds, 24.3% (n=120) bear parallel grooved or simple stamped exteriors, 23.3% (n=115) of the exteriors are cord roughened, 1.2% (n=6) are fabric impressed, and 1.0% (n=5) are check stamped.

Twenty-two of the miscellaneous sherds are decorated. Decorative elements include dentate impressions (n=10), brushing (n=4), fingernail impressions (n=2), stamps (n=1), drilled holes (n=1), finger pinches (n=1), SET (n=1), CWT (n=1), and incising (n=1).

5.3 Lithic Artifacts

A variety of lithic tools was collected from the site. Only formed stone tools and fragments of tools are included in the inventory and analyses because they are all that was usually collected from the site. The most abundant tool types are flaked lithic tools which are manufactured by “knocking small chips (flakes) of stone off the piece that is being shaped into a tool by hitting it with another object” (Kooyman 2000:9). Table 5.1 presents a list of the flaked lithic tools and the types of materials from which they are manufactured.

5.3.1 Projectile Points (n=295)

The vast majority of the diagnostic Antelope Creek site projectile points are classified as belonging to the late precontact period, but several are representative of the Middle Precontact period including one Early Side-notched, four Oxbow, one Duncan, three Hanna, and 18 Pelican Lake points (Figure 5.1). Many fragments of projectile

points and non-diagnostic points were also collected. Figures 5.2 to 5.6 illustrate the Late Precontact period projectile points. The data concerning the number of each projectile point and material type are presented in Table 5.2.

Table 5.1 Antelope Creek site flaked lithic tools

Lithic Material	Tool Type						Total
	projectile points	bifaces	scrapers	perforators	preforms	MURLs	
agate		1	2				3
chalcedony	15	3	29	1	2	10	60
chert	95	37	128	2	9	36	307
crystal quartz	1						1
feldspathic siltstone	3	6	1			1	11
fused shale	7	1	3		1	3	15
Gronlid siltstone	2		3				5
jasper	2	1	23		2	2	30
Knife River Flint	41	21	77	4	3	31	177
moss agate			2				2
obsidian	4	1		2		4	11
pebble chert			12			6	18
quartz	2	2					4
quartzite		12				3	15
silicified peat	32	24	8	1	6	5	76
silicified siltstone			2				2
silicified wood	5	12	5	2	1	7	32
Swan River Chert	83	63	33	6	27	31	243
unidentified	3	1	2			2	8
Total	295	185	330	18	51	141	1020

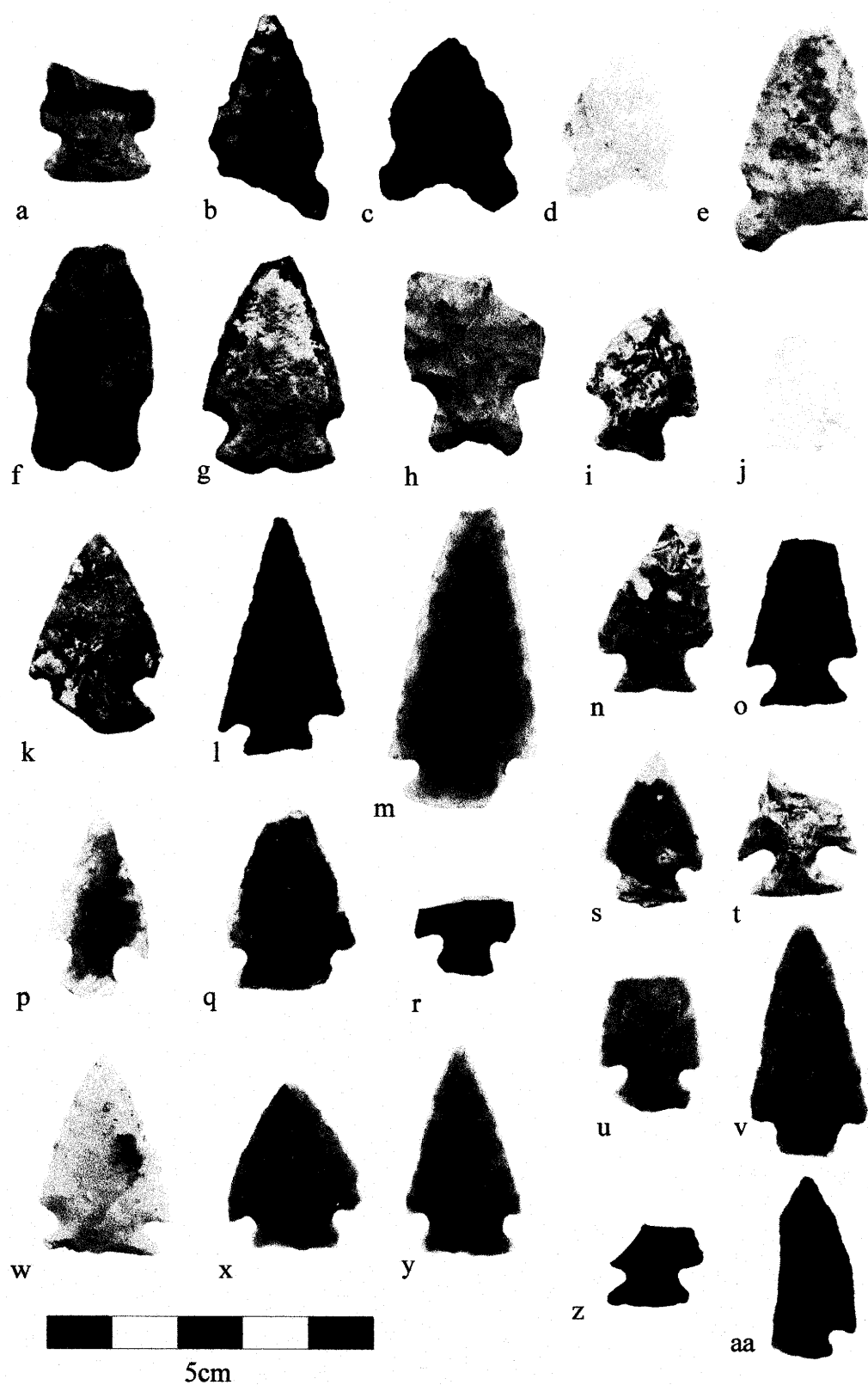


Figure 5.1 Antelope Creek site Middle Period projectile points. Early Side-notched: a; Oxbow: b-e; Duncan: f; Hanna: g-i; Pelican Lake: j-aa.

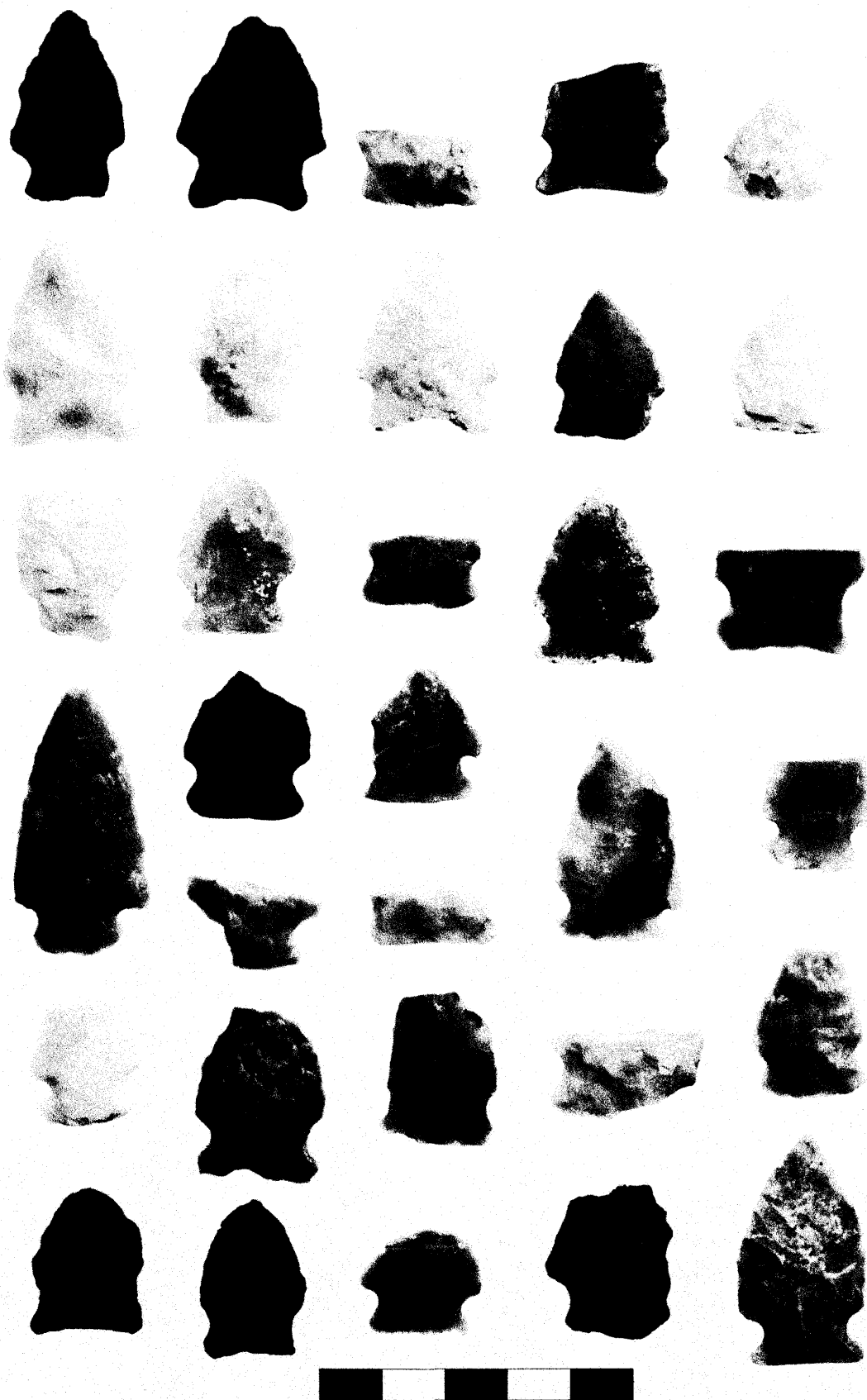


Figure 5.2 Antelope Creek site Besant projectile points.

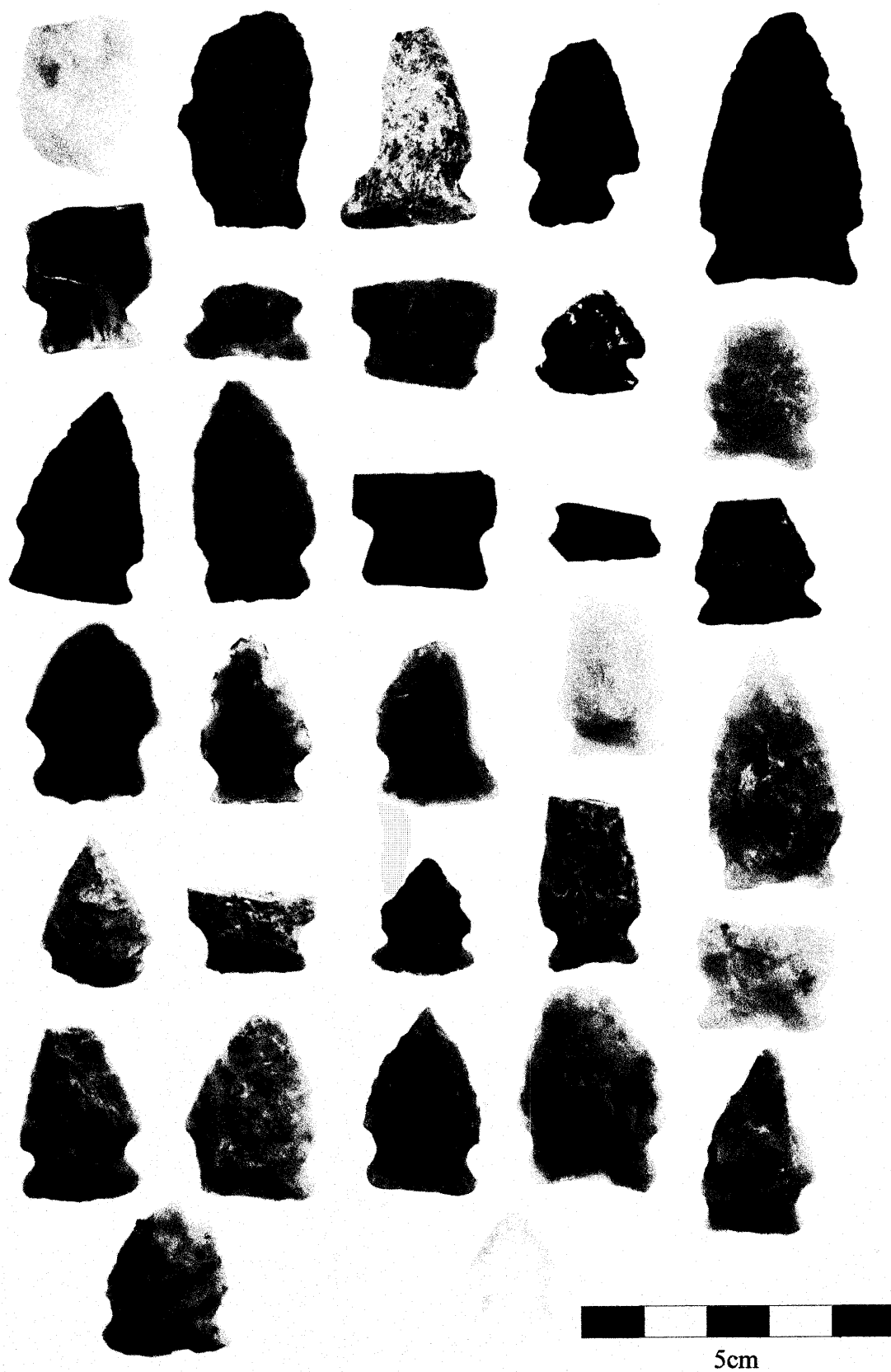


Figure 5.3 Antelope Creek site Besant projectile points.

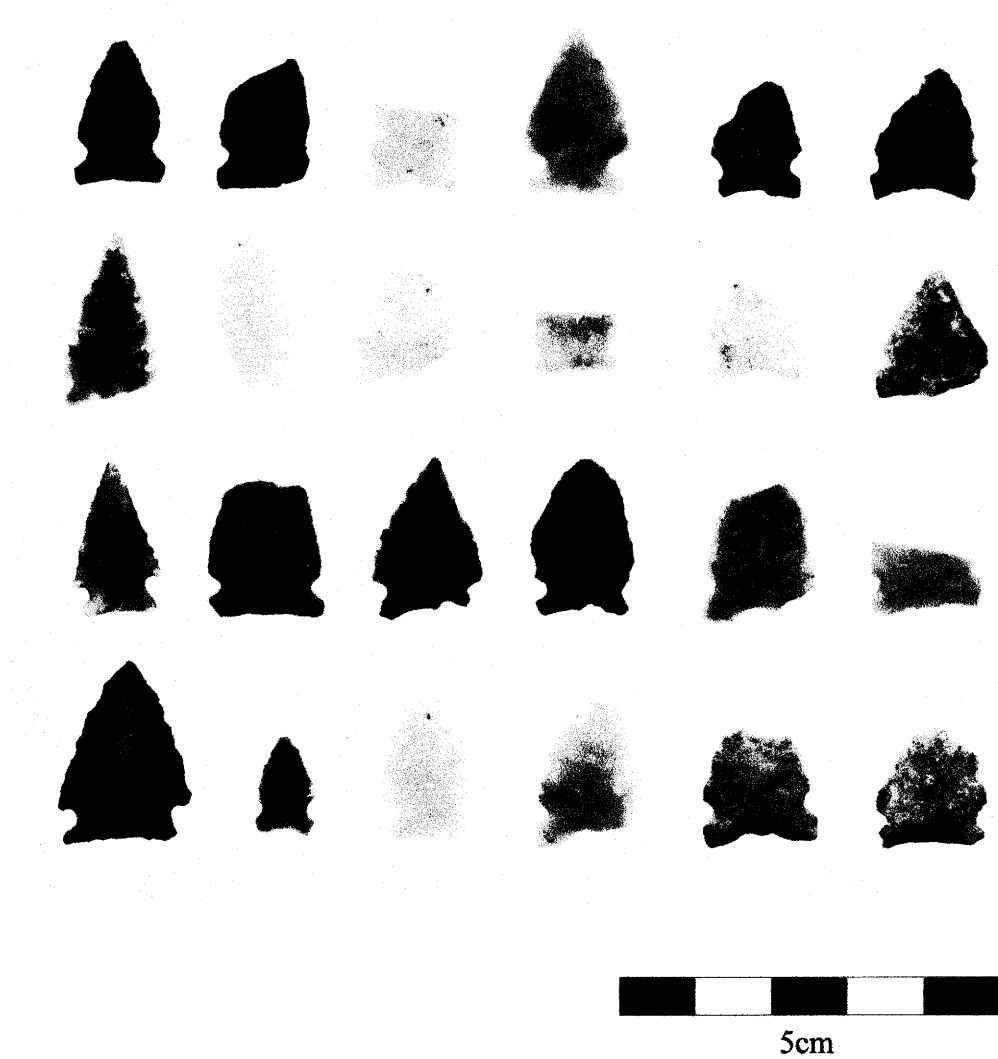


Figure 5.4 Antelope Creek site Avonlea projectile points.

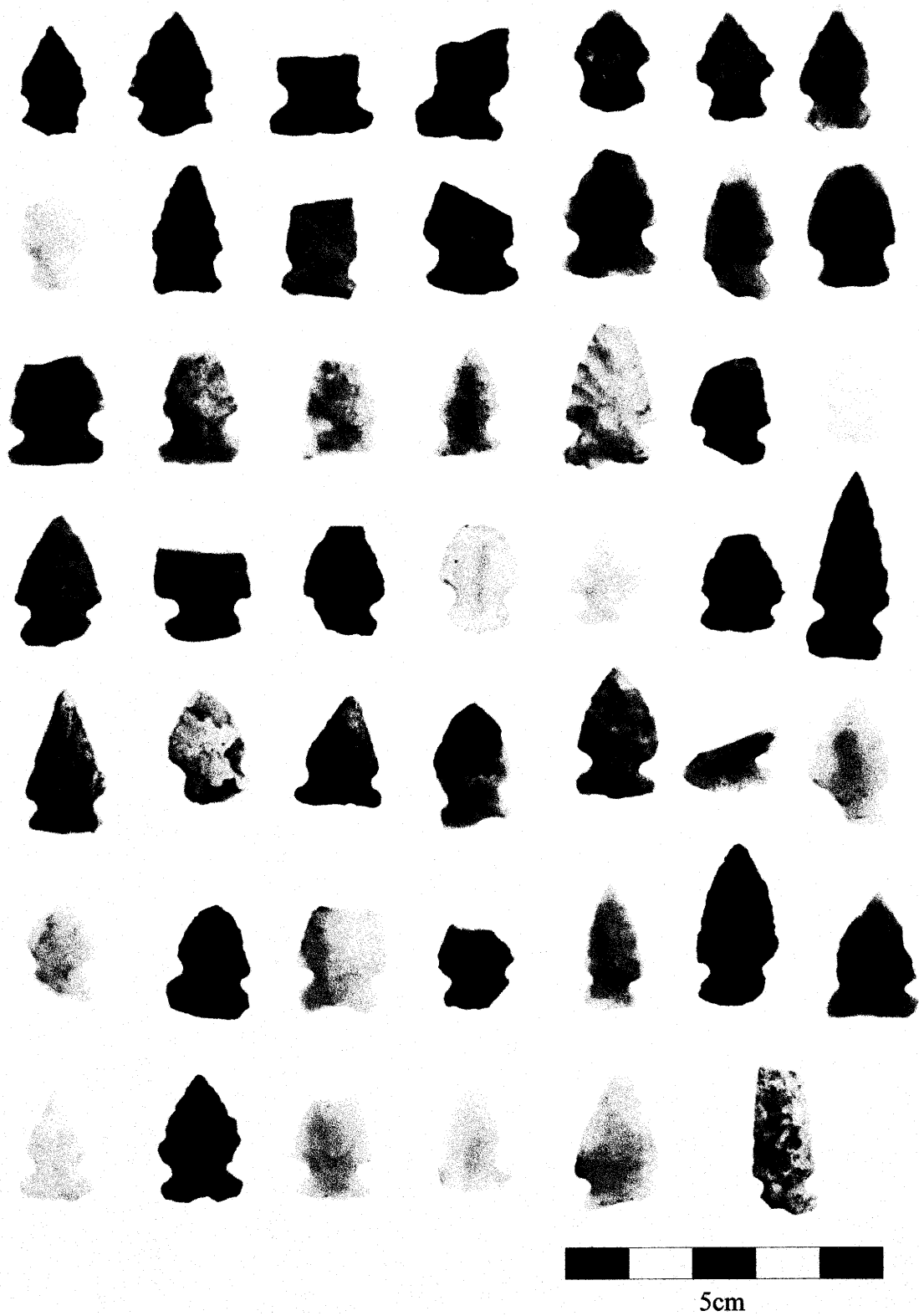


Figure 5.5 Antelope Creek site Prairie Side-notched projectile points.

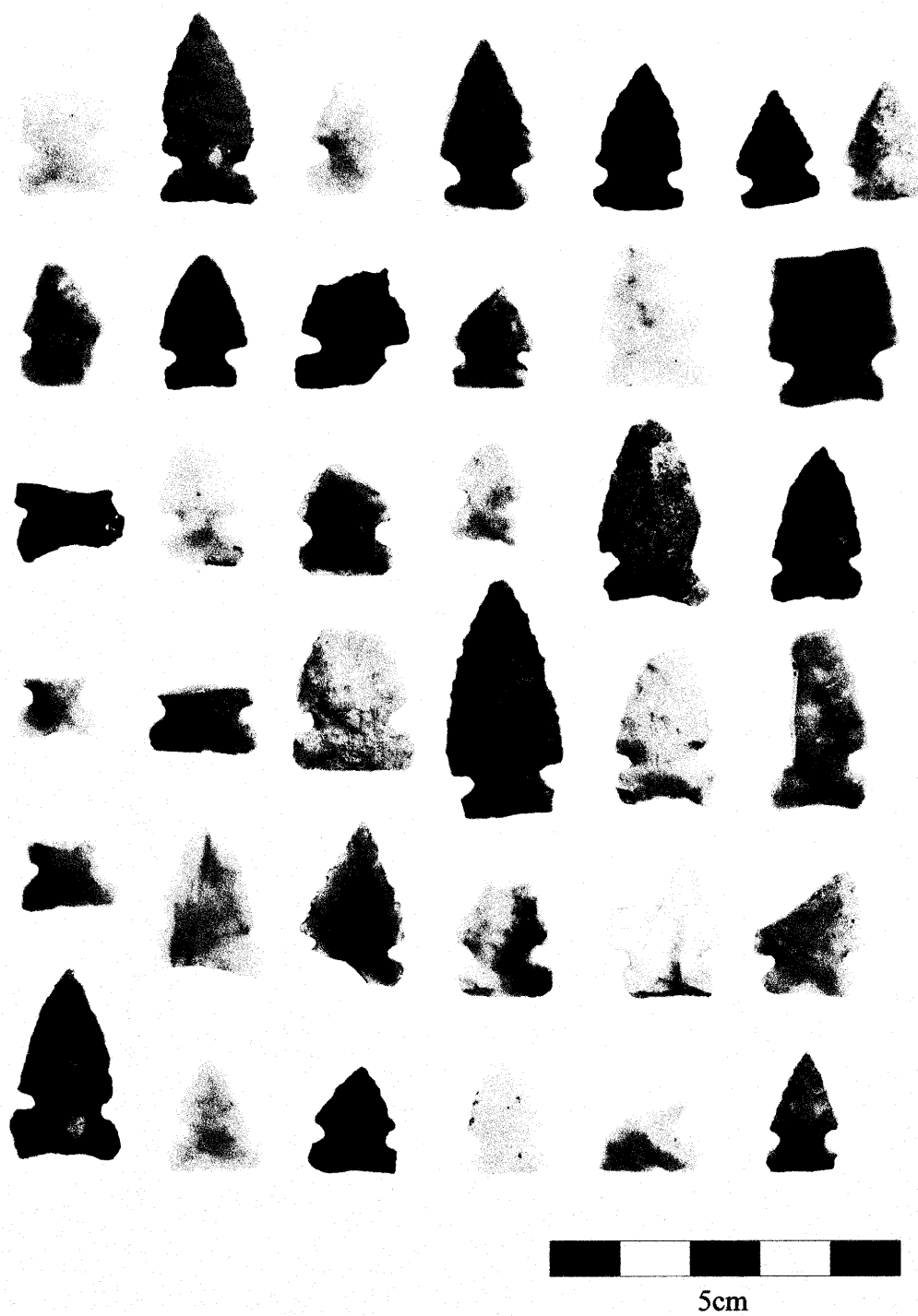


Figure 5.6 Antelope Creek site Plains Side-notched projectile points.

Table 5.2 Antelope Creek site projectile points and lithic material

	Projectile Point Type											
material	Early Side-notched	Oxbow	Duncan	Hanna	Pelican Lake	Besant	Avonlea	Prairie Side-notched	Plains Side-notched	Unidentifiable	Point fragments	Total
chalcedony					2	1	1	1		3	7	15
chert	1	3			7	19	12	19	11	10	13	95
crystal quartz						1						1
feldspathic siltstone						2				1		3
fused shale				1	1				4		1	7
Gronlid siltstone						1	1					2
jasper							2					2
Knife River Flint				1	5	11	2	6	3	4	9	41
obsidian						1			1	1	1	4
quartz									1		1	2
silicified peat			1			4	4	10	3	5	5	32
silicified wood					1	2					2	5
Swan River Chert		1		1	2	22	4	10	14	9	20	83
Unidentified								1			2	3
Total	1	4	1	3	18	64	26	47	37	33	61	295

5.3.2 Bifaces (n=183)

The Antelope Creek site bifaces are flaked lithic tools that exhibit flaking on all or most of the dorsal and ventral surfaces. Of the tools classified as bifaces, 122 are fragments, and the remaining 61 are classified based on their shape. Table 5.3 presents the number of each shape and the lithic material they are manufactured from. Figure 5.7 illustrates a sample of the Antelope Creek site bifaces.

Table 5.3 Antelope Creek site biface shape and material type

Lithic Material	Biface Type							Total
	ovoid	discoid	quadrilateral	crescentic	narrow	irregular	hafted	fragments
agate								1
chalcedony						1		2
chert	6	1		2		1	1	26
feldspathic siltstone	2	1						3
fused shale								1
jasper	1							
Knife River Flint	4					2	1	14
obsidian								1
quartz						2		
quartzite	4					1		7
silicified peat	3	2				4		15
silicified wood	1					3		8
Swan River Chert	7	2	2		2	5	1	44
unidentified	1							
Total	29	6	2	2	2	19	3	122

5.3.3 Scrapers (n=326)

Scrapers are usually unifacial tools with flaking on the lateral or distal edges. Several types of scrapers have been collected from the Antelope Creek site. Endscrapers have a working edge on the distal end while sidescrapers have the working edge on the lateral edge. The vast majority of the scrapers are endscrapers of which 314 were collected. Figure 5.8 illustrates a sample of the Antelope Creek site endscrapers. Nine of the scrapers are classified as sidescrapers and three unifacial tools with irregular outlines are classified as miscellaneous scrapers. Four bifacial endscrapers were also collected. These are unusual, because unlike most scrapers, both the dorsal and ventral



Figure 5.7 Selected Antelope Creek site bifaces. Ovoid: a-c; discoid: d-f; quadrilateral: g; crescentic: h; irregular: i-j; narrow: k-l; hafted: m-o.



Figure 5.8 Selected Antelope Creek site endscrapers.

surfaces are flaked. One of the bifacial scrapers has an outline typical of unifacial endscrapers. Three of the bifacial endscrapers have triangular outlines that resemble projectile point preforms but with a steep working edge on the distal edge that is similar to the working edge of an endscraper. Bifacial endscrapers are considered evidence of direct trade between Mortlach and Middle Missouri peoples (Walde 1994: 90-92).

Figure 5.9 illustrates a sample of the miscellaneous scrapers and bifacial endscrapers collected from the Antelope Creek site.

5.3.4 Perforators (n=18)

Perforators are flaked lithic tools with a pointed working end that could be used to engrave or bore holes in other materials. Figure 5.10 illustrates the variety of perforators collected from the Antelope Creek site.

5.3.5 Preforms (n=51)

The preforms are flaked lithic tools with triangular or ovoid outlines that exhibit the general outline of a projectile point but lack notches or hafting elements at the base. Figure 5.11 illustrates a sample of the preforms from the Antelope Creek site.

5.3.6 Marginally Utilized Retouched Lithics (MURLs) (n=141)

This tool category includes artifacts that exhibit marginal bifacial or unifacial flaking and is a category that includes many artifacts of various shapes and sizes with minimal reworking. Figure 5.11 illustrates a sample of the MURLs collected from the Antelope Creek site.



Figure 5.9 Selected Antelope Creek site miscellaneous scrapers: a-g; and bifacial endscrapers: h-k.

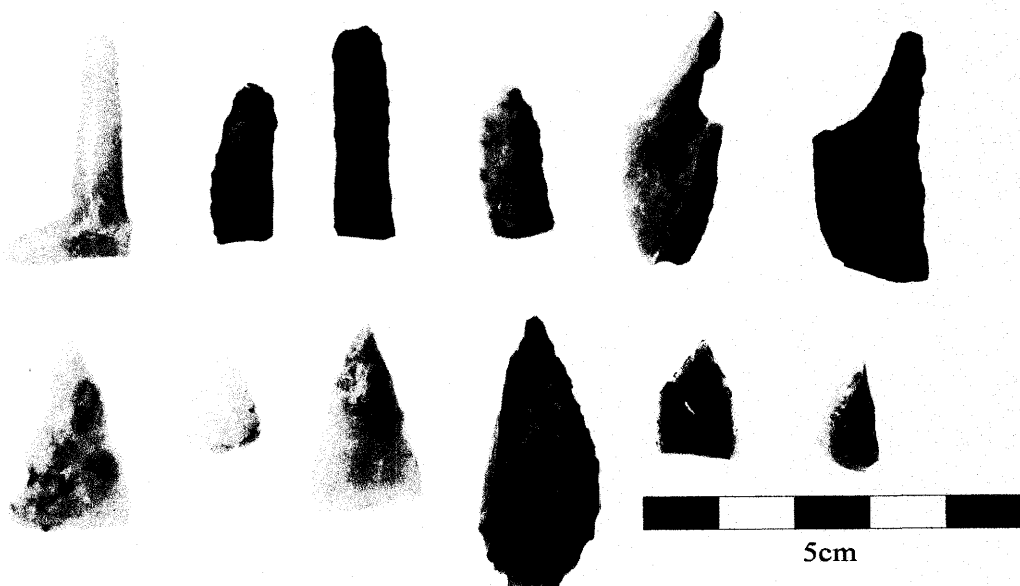


Figure 5.10 Selected Antelope Creek site perforators.

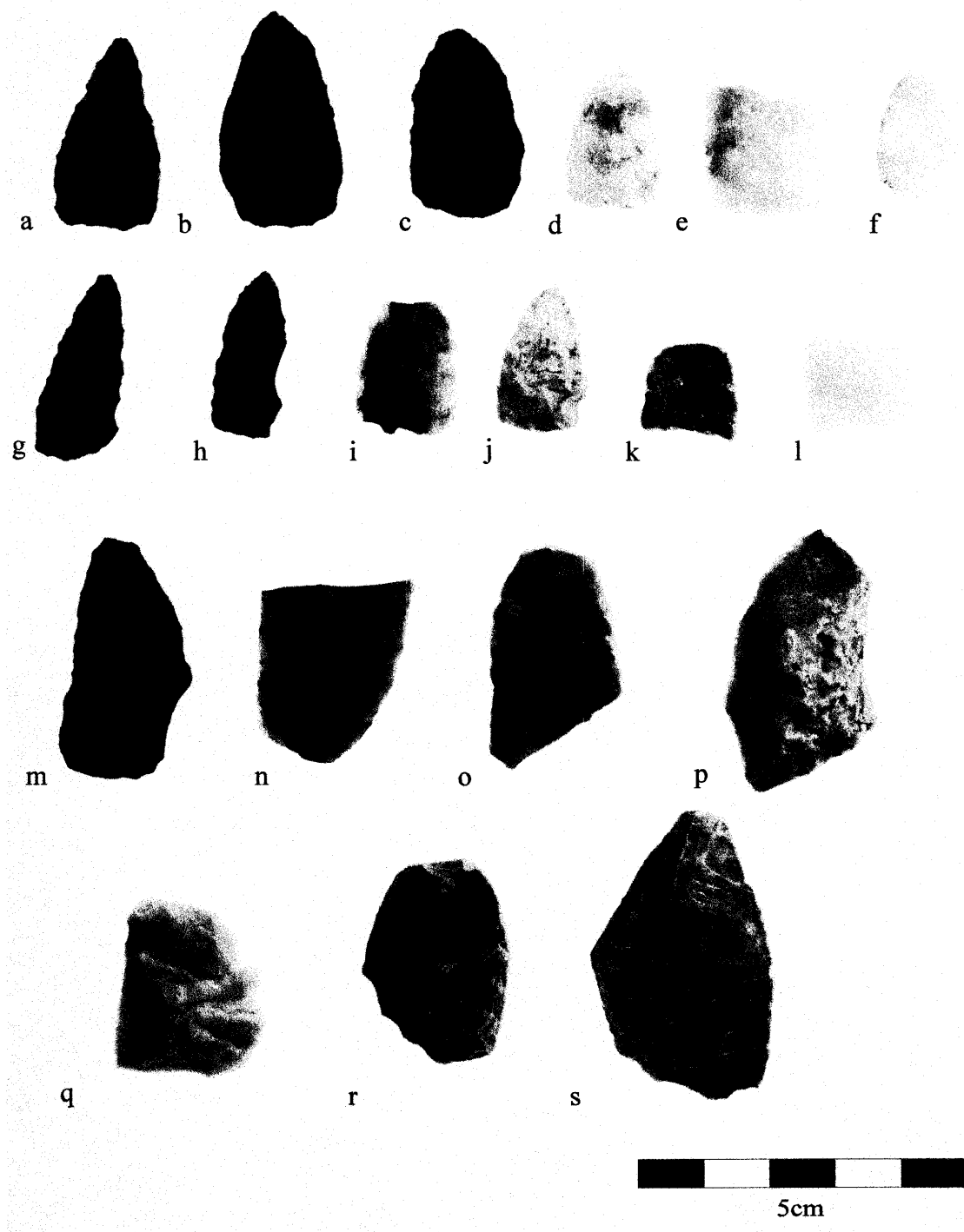


Figure 5.11 Selected Antelope Creek site preforms: a-l; MURLs: m-s.

5.3.7 Coarse Stone Tools (n=15)

These tools are large and coarse, exhibit minimal reworking, and are manufactured from coarse-grained materials. Cobbles that show evidence of use as chipping hammers are also included in this category. Three large bifaces exhibit reworking on one lateral edge (Figure 5.12,b,g,h). One is manufactured from sandstone and two are quartzite. One quartzite chitho was also collected (Figure 5.12,a). A chitho is a medium to large discoidal scraping tool. The edge, formed by coarse chipping, extends around the perimeter of the tool (Dyck and Morlan 1995:124). Four quartzite unifaces and one feldspathic siltstone uniface are also represented (Figure 5.12,c-f,i). Six cobbles that exhibit battering on the ends are classified as chipping hammers. Figure 5.12 illustrates a sample of the Antelope Creek site coarse stone tools with the exception of the cobble chipping hammers.

5.3.8 Ground/Pecked Stone Tools (n=5)

These tools are manufactured by grinding or pecking the material to achieve the desired shape. The ground stone tools include two grooved maul fragments, two partial grooved axes, and a sandstone artifact that has a flat base and domed top with a 11.5 mm deep drilled hole (Figure 5.13).

5.3.9 Pipes (n=7)

At least seven straight, tubular pipes were collected from the Antelope Creek site (Figure 5.14). A straight pipe is a tubular pipe to be used with a stem, and the stem end has a bore large enough for a stem insert. These pipes often have a rim at the stem end, and the bowl may be round or rectangular (Paper 1988:70). According to

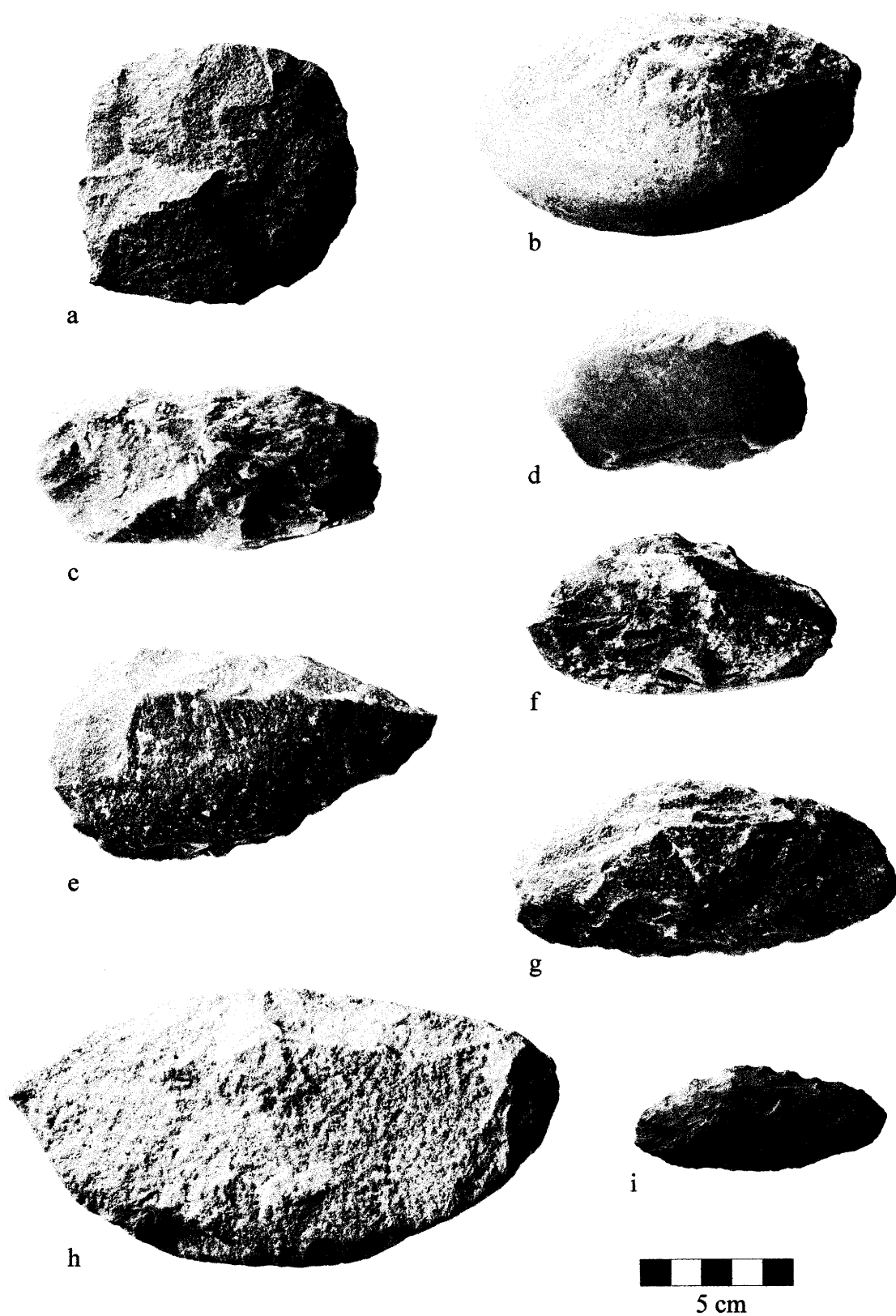


Figure 5.12 Antelope Creek site coarse chipped tools. Chithos: a; bifaces: b, g, h; unifaces: c-f, i.

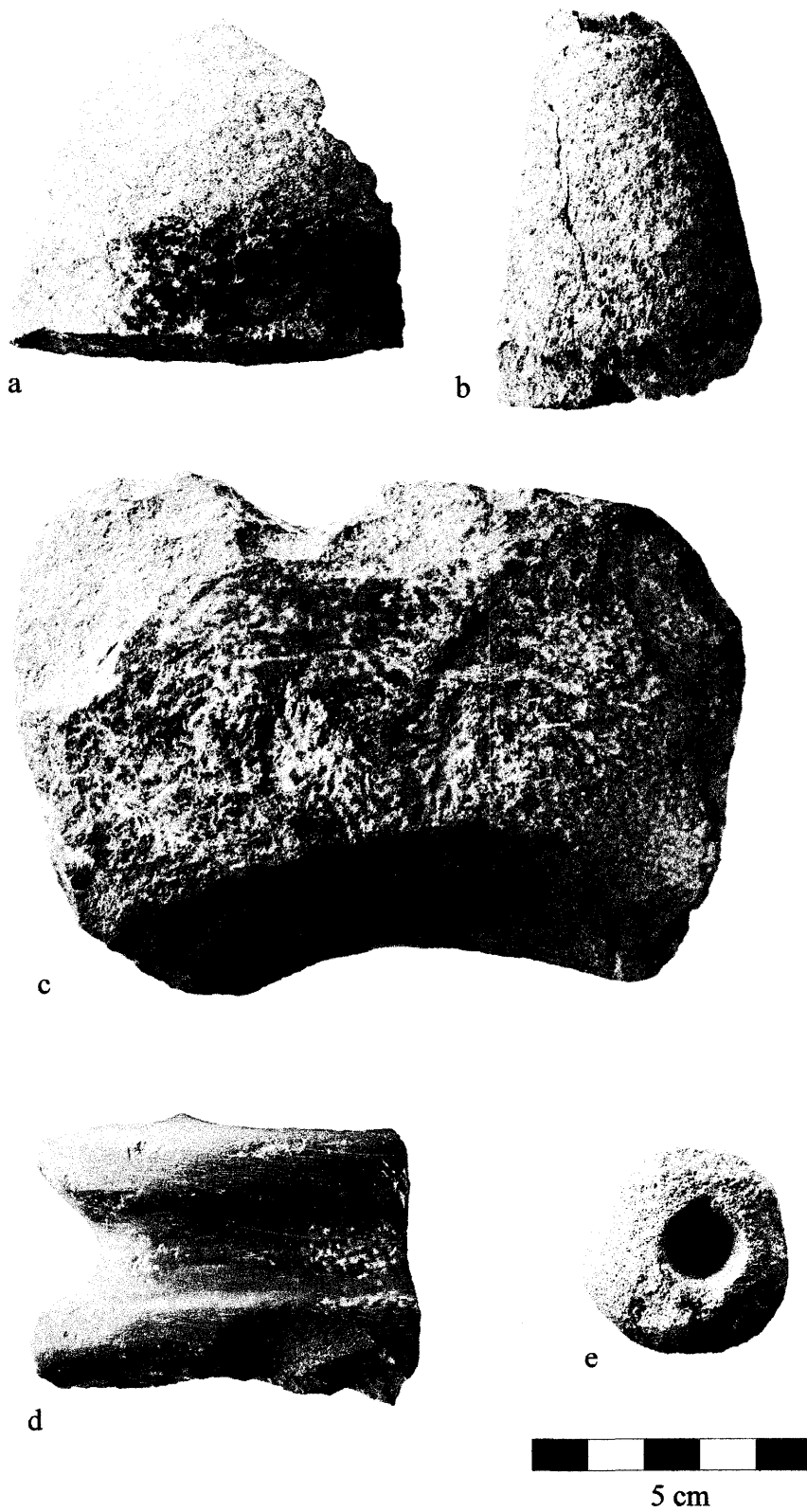


Figure 5.13 Antelope Creek site ground stone tools. Grooved maul fragments: a, b; grooved axes: c, d; sandstone object: e.



Figure 5.14 Antelope Creek site pipes.

Ewers (1963:58) the straight pipe bowl was usually smoked while fitted to a short willow or rosewood stem, which was split longitudinally, the pith removed, and the two pieces glued together and tightly bound with sinew. Mandelbaum (1979:96) notes that the Plains Cree made stems, for elbow pipes, from saskatoon branches split longitudinally and then hollowed out and bound together with sinew.

One large, grey steatite, tubular pipe is represented by 27 sherds that have been refitted to form two large sections of the pipe (Figure 5.14,a). The interior is smooth with many striations from the hollowing out of the pipe. The exterior has been heavily smoothed and polished until it exhibits a sheen. The incomplete pipe is a minimum of 19 cm long with slightly curved sides and collared stem area. The pipe tapers slightly towards the stem. The diameter of the bore is 2.3 cm wide in the middle of the pipe and

narrows to 1.5 cm at its narrowest near the mouth of the pipe. The diameter of the bowl cannot be determined because only a small portion is present. The thickness of the pipe ranges from 4.1 mm at the bowl end to 6.9 mm in the middle. Blackening on the interior and exterior of the pipe extends 9 cm above the lip on the bowl end, with the darkest area right at the lip of the bowl. An encrustation of carbonized residue coats the interior of the bowl.

A pipe similar to this Antelope Creek pipe was discussed by Dale Russell at the November 15, 2002 Saskatoon Archaeological Society meeting. This pipe was recovered from site HaOh-14, near Peter Pond Lake. Muriel Carlson (1992:80) discusses a schist tubular pipe similar to these that was recovered from the Edam area. The forms of these pipes are all similar with only slight variation in size and wall thickness. Unfortunately, all three pipes are from disturbed contexts.

One complete, undecorated, red pipestone straight pipe was collected (Figure 5.14,b). This 7.4 cm long red pipe is lightly blackened at the bowl end, but lacks carbonized residue. The circular bowl has an exterior diameter of 2.2 cm with an interior diameter of 1.7 cm. The pipe tapers to a diameter of 1.7 cm thick before thickening at the square stem end which measures 1.9 cm across with a 1.2 cm diameter stem bore. A red pipestone pipe with the same form was recovered from a burial mound near Halbrite in southeastern Saskatchewan (Montgomery 1908).

Two grey steatite straight pipes, one complete and one incomplete, have been recovered (Figure 5.14,c-d). The complete pipe is 4.3 cm long and the exterior is heavily smoothed with a slight luster. The pipe bowl is blackened with an encrustation of carbonized residue on the interior. The pipe has slightly curved edges with a collar at the stem. The bowl has an exterior diameter of 2.2 cm and the neck tapers to 1.5 cm

before expanding at the stem area. The diameter of the stem bore is 1.3 cm. The interior of the stemmed area exhibits ridges where the stem may have been inserted.

The incomplete straight pipe has a form similar to the one above. The exterior is highly polished, and an encrustation of carbonized residue coats the interior of the bowl. The pipe has a maximum length of 3.6 cm. The dimensions of the bore cannot be determined because such a small portion is present.

A fragment of a red pipestone pipe stem was also collected (Figure 5.14,e). This collared stem is incised with converging lines and overlapping incisions that form an "X." The stem has a diameter of 18.5 mm with a bore diameter of 11.6 mm. The diameter below the collared stem is 15.4 mm.

Two fragments of red pipestone straight pipes are also represented (Figure 5.14,f-g). Both of the fragments have a bore diameter of approximately 1.6 cm. Although similar, they appear to represent two different pipes. Both are undecorated and exhibit blackening at one end (presumably the bowl). One of the reconstructed portions (Figure 5.14,f) is 7.6 cm long while the other (Figure 5.14,g) is 7.7 cm long.

William Mulloy (1958:152) classifies tubular pipes as belonging to the Late Precontact and Historic periods. They have also been recovered from a McKean level at the Cactus Flower site in Alberta (Brumley 1975). Pipes similar to the Antelope Creek pipes have also been recovered from burial mounds in southeastern Saskatchewan, Manitoba, and North and South Dakota (Hanna 1976; Montgomery 1906, 1908; Syms 1979).

5.3.10 Miscellaneous Pipe Sherds (n=36)

Twenty-three sherds of red pipestone, including 11 that bear varying degrees of blackening, and 13 fragments of grey steatite, including 12 that are coated with an encrustation of carbon residue, were collected. These sherds may belong to the aforementioned pipes but cannot be refitted.

5.3.11 Incised Red Pipestone (n=2)

A unique incised tablet was collected from the Antelope Creek site (Figure 5.15). This red pipestone tablet is rectangular with an incised image on each face. One side of the tablet is incised with a horned, anthropomorphic figure with outstretched arms, and the other side has a star. Numerous scratches and striations are present on the surface of the tablet, especially on the side with the star. The edges of the tablet are incised with a single line that extends around the tablet. The tablet is 139.8 mm long and 10.6 mm thick. One of the lateral edges is broken so the width cannot be determined. This tablet has previously been discussed by Tim Jones (1997:82) in a Saskatchewan Archaeological Society newsletter. Jones (1997) notes that the horned anthropomorphic figure is a common motif found across the Northern Plains and adjacent boreal forest. Isinger (1971:7) suggests that Saskatchewan red pipestone tablets are associated with burial mounds and related to the southeast Saskatchewan, Manitoba and Dakota mounds. Most Saskatchewan tablets have been recovered from southeastern Saskatchewan.

One piece of incised red pipestone was recovered from the site (Figure 5.16). This incomplete artifact is 31.7 mm long and 12.0 mm wide with a maximum thickness of 10.7 mm. The artifact is polished and the top is decorated with a chevron design. A chevron pattern and vertically incised lines decorate both sides.



Figure 5.15 Antelope Creek site red pipestone tablet.

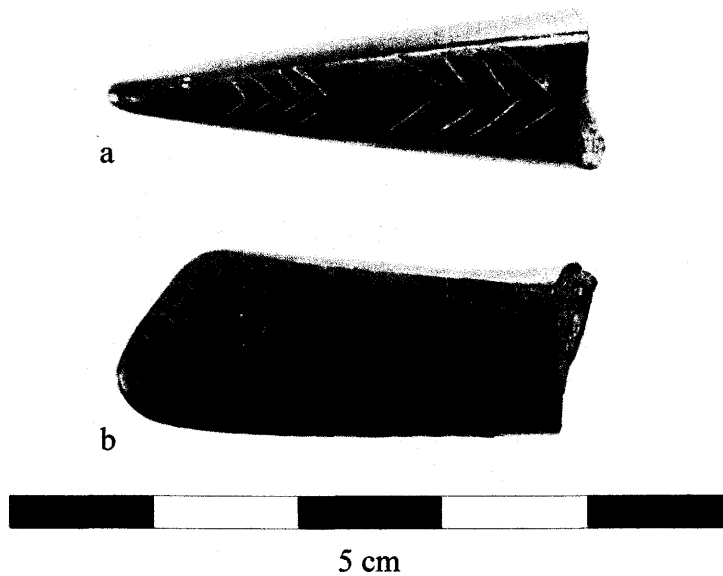


Figure 5.16 Antelope Creek site incised red pipestone object. Top view: a; side view: b.

5.4 Worked Bone and Shell

Faunal materials were collected only if they exhibited evidence of human modification. Bone tools recovered from the Antelope Creek site include fleshers, awls, spatulas, an ice glider, bird bone tubes, miscellaneous modified bone and decorative shell objects.

5.4.1 Fleshers (n=2)

The fleshers from the Antelope Creek site are manufactured from the long bones of large mammals (Figure 5.17). Their distal ends have been split longitudinally and notched to create a serrated edge. One of the fleshers is manufactured from an unidentifiable long bone and the other from the left metatarsal of a bison. Both of the fleshers are incomplete—only the distal ends are present.

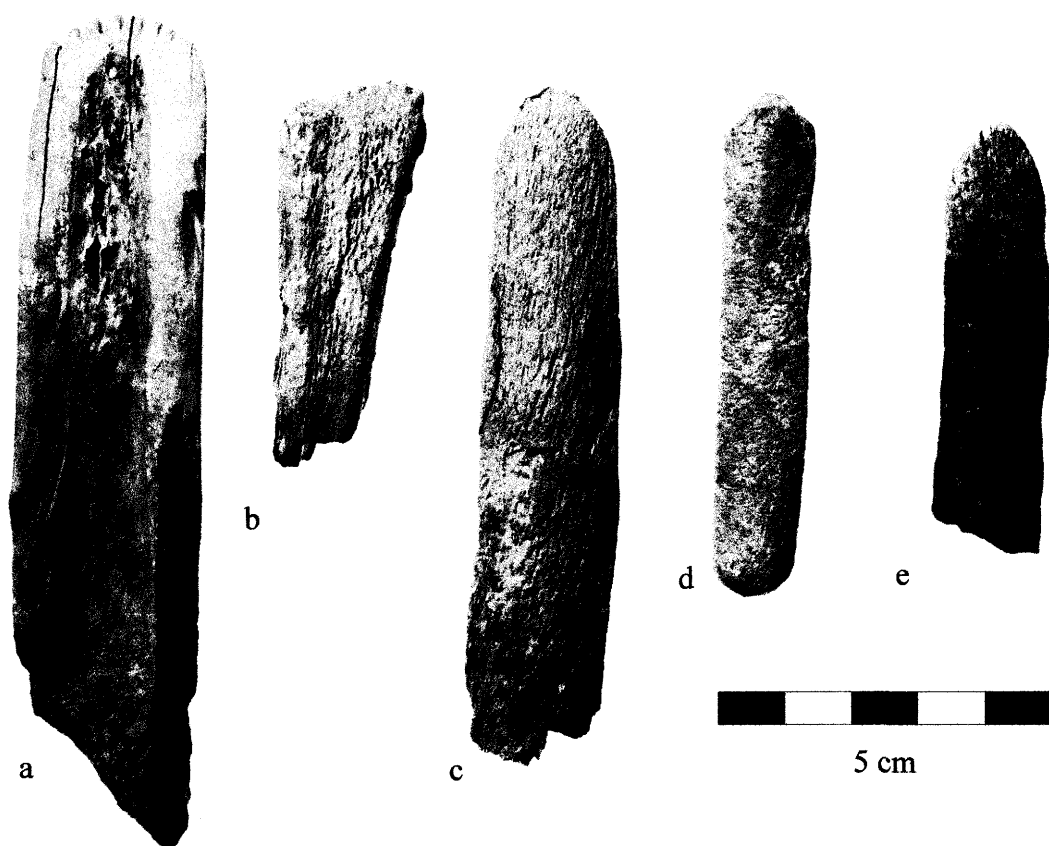


Figure 5.17 Antelope Creek site fleshers: a-b; spatulas: c-e.



Figure 5.18 Antelope Creek site awls: a-b; ice glider: c.

5.4.2 Spatulas (n=3)

Two incomplete and one complete bone tool with rounded ends manufactured from ungulate ribs are present in the collection (Figure 5.17). Kehoe (1973:131) notes these tools may be used to remove marrow from bones and also indicates that rib spatulas were used as quill flatteners. Dyck and Morlan (1995:29) refer to bone tools with a similar form as pressure flakers.

5.4.3 Awls (n=2)

The two awls from the Antelope Creek site are manufactured from fragments of ungulate ribs (Figure 5.18,c). The proximal ends are tapered to create points that could be used to puncture soft materials such as leather. One of the awls exhibits carnivore chewing on the proximal end (Figure 5.18,a).

5.4.4 Ice Gliders (n=1)

One object, manufactured from a bison rib, represents an undecorated ice glider (Figure 5.18). This rib has one rounded end, and the other end is hollowed out by the removal of some of the rib's cancellous material. Fenenga (1954:31) recognized artifacts of this type as "slotted-rib heads for ice-glider darts." Fenenga (1954) describes the ice glider game of the Northern Plains and archaeological data from sites in South Dakota. Artifacts of this form are now commonly referred to as ice gliders and are often recovered from Mortlach sites. Nicholson et al. (2003) note that ice-gliders have been documented from across most of the Plains of Saskatchewan and southwestern Manitoba extending south into the northern plains of the United States.

5.4.5 Bird Bone Tubes (n=2)

One 120.4 mm long bird long bone tube probably represents a bird bone whistle (Figure 5.19,e). An end was cut at an angle and polished smooth. A 2.7 mm wide hole was drilled at one end of the tube. The other end has a portion of one large hole, and on the sides of the bird bone tube are portions of tiny drilled holes that go through the sides of the tube. A 19.9 mm long cut section of unidentifiable bird bone probably represents a bird bone bead (Figure 5.19,d).

5.4.6 Miscellaneous Modified Bone (n=3)

Miscellaneous modified bones include one polished long bone fragment with cut marks (Figure 5.19,c), one long bone fragment with notches on the side (Figure 5.19,b), and a fragment of unidentifiable mammal bone with notches on one side that may represent a dentate impressing tool or a portion of a notched pendant (Figure 5.19,a). None of these fragments of modified bone can be identified to species.

5.4.7 Decorative Shell Objects (n=4)

Two shell beads were collected. One of the beads has been ground into a symmetrical disc with a 10.3 mm diameter (Figure 5.20,a). A 4.9 mm wide hole was drilled through the centre. The bead has a maximum thickness of 3.0 mm. The other shell is more roughly shaped (Figure 5.20,b). It is a 17.9 mm by 13.7 mm fragment of shell that has a hole with a diameter of 3.3 mm drilled through it. It is 1.7 to 4.2 mm thick. The edges of the bead have not been ground into a symmetrical shape.

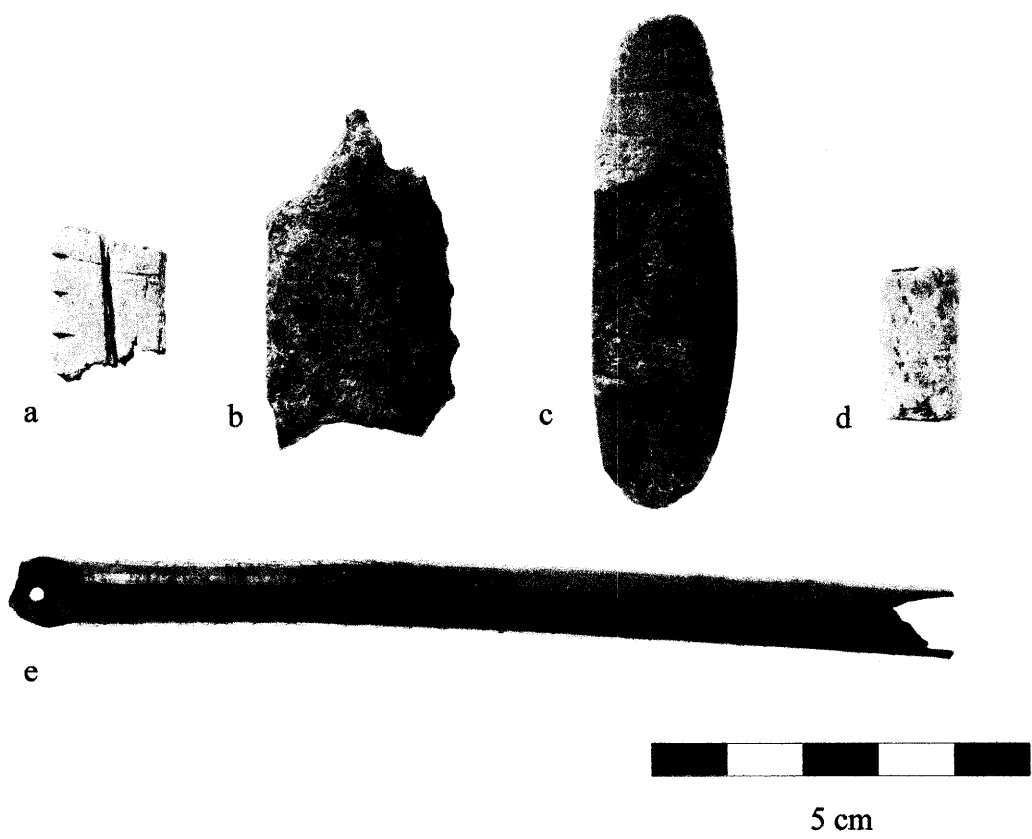


Figure 5.19 Antelope Creek site bone. Dentate: a; notched: b; cutmarked: c; bird bone bead: d; bird bone tube: e.

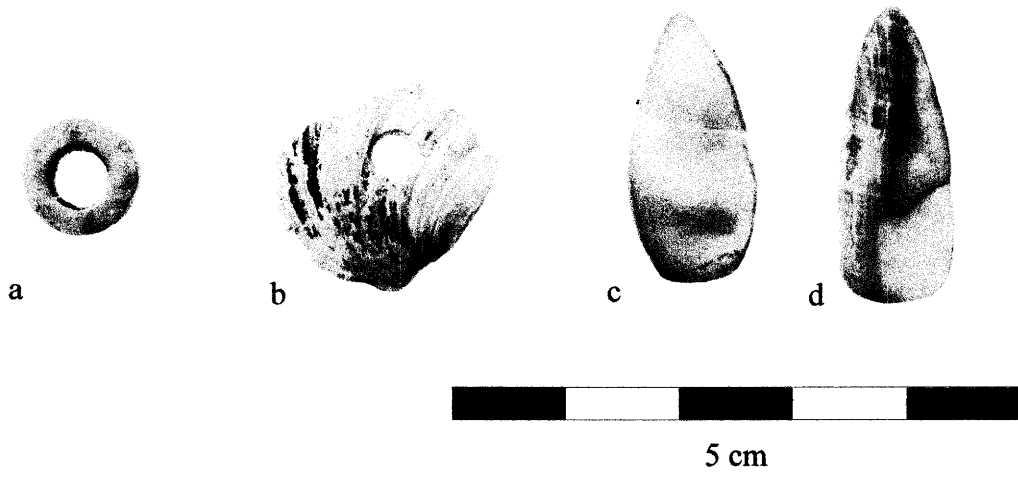


Figure 5.20 Antelope Creek site shell bead: a-b; flakes: c-d.

Two shell objects that were ground into tear drop shaped pieces were collected from the Antelope Creek site (Figure 5.20,c-d). These objects are very thin and delicate. They are 0.7 mm thick with rounded bases and pointed tips. One is 25.4 mm long with a maximum width of 9.6 mm (Figure 5.20,d). The other is 23.1 mm long with a maximum width of 10.9 mm (Figure 5.20,c).

5.5 Historic Period Artifacts

Numerous artifacts representative of the historic period have been collected from the Antelope Creek site. Some of these are trade goods and others are representative of the ranching and homestead era.

5.5.1 Metal Projectile Points (n=3)

The iron projectile points from the Antelope Creek site have lanceolate outlines, flat cross sections, and stemmed bases. Two of the points (Figure 5.21,a, b) have straight lateral edges and pointed tips. One of the points (Figure 5.21,c) has one straight and one concave lateral edge probably resulting from use wear or modification.

One of the points (Figure 5.21,a) exhibits a serrated stem with beveled blade edges. Pyszczyk (1999:178) notes that in Alberta, with the exception of one metal projectile point from Fort Augustus/Edmonton III (ca. A.D. 1810-1813), all metal projectile points with serrated stems post-date A.D. 1830. According to Pyszczyk (1999:178, 182), metal projectile points increase in size through time. Measurements of the metal points from the Antelope Creek site suggest that they likely were manufactured after A.D. 1830.

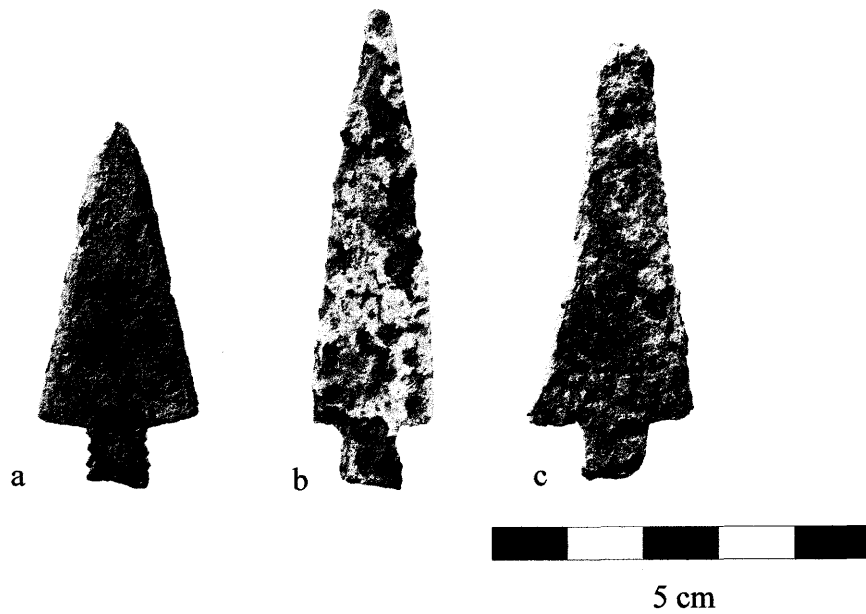


Figure 5.21 Antelope Creek site metal projectile points.

5.5.2 Trade Bead (n=1)

The trade bead is dark green, opaque, glass with an elliptical shape and circular cross section (Figure 5.22). It is decorated with an inlaid white swirl.

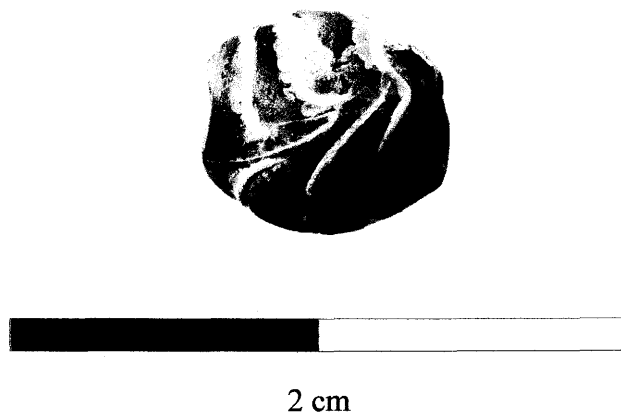


Figure 5.22 Antelope Creek site trade bead.

5.5.3 Arms and Ammunition (n=16)

The arms and ammunition collected from the Antelope Creek site are listed in Table 5.4. Gun parts that have been recovered include an incomplete butt plate and the lock plate of a flintlock gun (Figure 5.23). One complete, dark brown gunflint was also collected (Figure 5.23,c). The material is translucent at the edges. It is 24.1 mm long and 20.4 mm wide. The cross section and shape most closely resemble the English fine grade, blade gunflint (Syms 1986).

Table 5.4 Antelope Creek site arms and ammunition

Ammunition	
Cartridges	
12 gauge shot shells	3
.44 calibre centre fire cartridge case unidentified type	2
.44 calibre centre fire cartridge case Winchester	1
.44 calibre rim fire cartridge case Henry	1
Bullets	5
Musket ball	1
Gun Parts	
Butt plate	1
lock plate	1
Gun Flint	1
Total	16

5.5.4 Knives (n=2)

One incomplete, corroded, iron knife with a bone handle was collected. The tang is broken and one side of the handle is missing. The knife has a tapered blade with a pointed tip. The blade is 12.1cm long and with a maximum width of 2.4 cm. The bone handle is patterned with right oblique incisions (Figure 5.24,a).

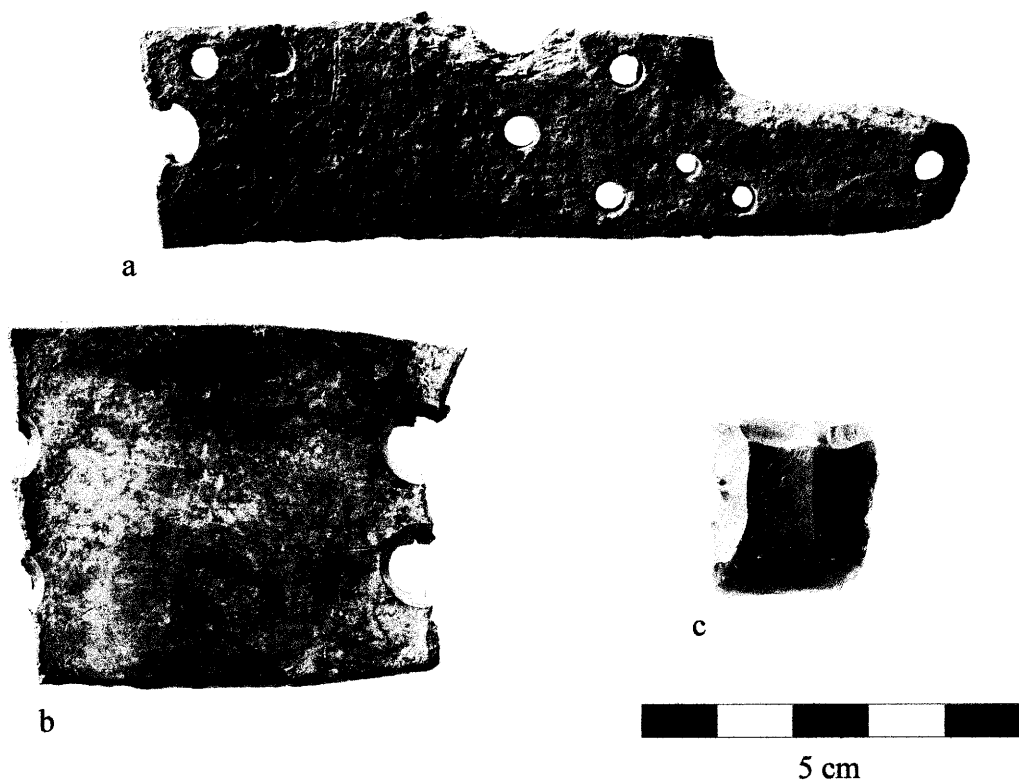


Figure 5.23 Antelope Creek site firearms. Lock plate: a; butt plate: b; gun flint: c.

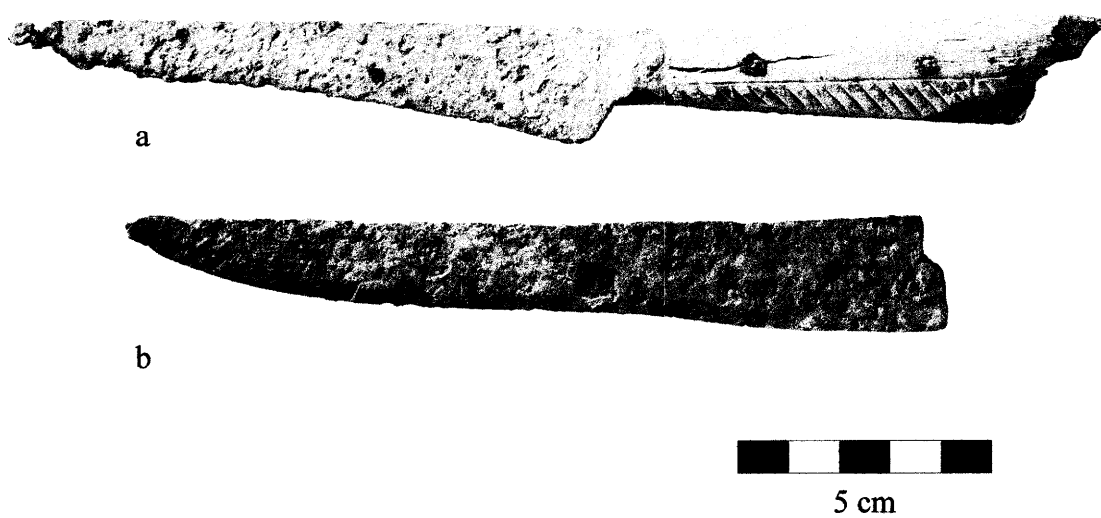


Figure 5.24 Antelope Creek site knives.

One incomplete knife blade has no handle or tang. The blade is tapered with a pointed tip. The blade has a maximum width of 22.1 cm and a length of 16.3 cm (Figure 5.24,b).

5.5.5 Glass (n=6)

One bottle neck, two small medicine bottles and three small sherds of bottle glass have been collected (Figure 5.25). These artifacts probably relate to the early ranching/homestead era.

5.5.6 Historic Pipes (n=2)

One of the pipes is a clay stub-stemmed pipe. The stem is complete, but most of the pipe bowl is missing, and there are no maker's marks or decoration on it. The pipe is a yellowish brown colour with a glazed exterior (Figure 5.26,b).

A white porcelain effigy pipe was also collected. The pipe bowl is a woman's head. The base of the pipe has traces of green indicating that the pipe was painted, but the colour has since worn off (Figure 5.26,a).

5.5.7 Cuff Link (n=1)

The cuff link is a ball back cuff link with a mother of pearl front and ferrous metal back (Figure 5.27,a).

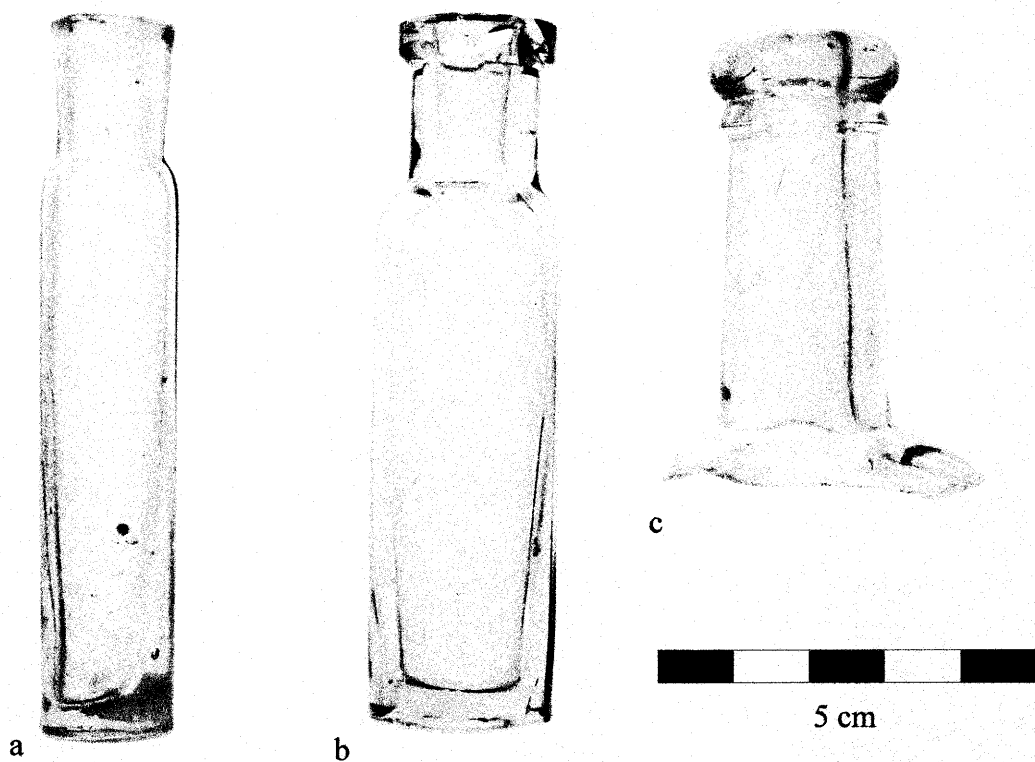


Figure 5.25 Antelope Creek site bottles.

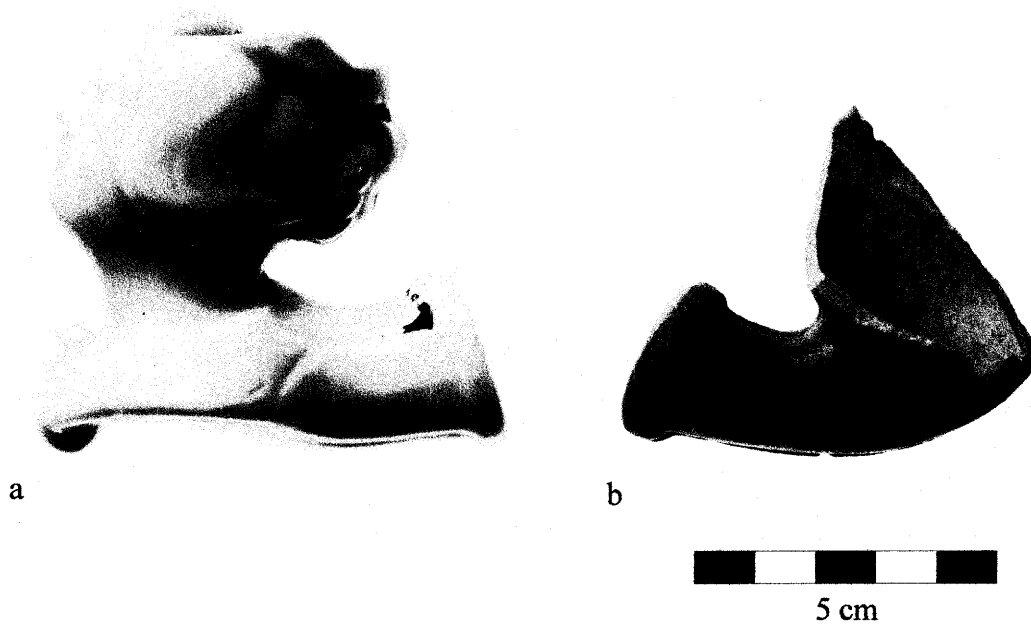


Figure 5.26 Antelope Creek site ceramic pipes.

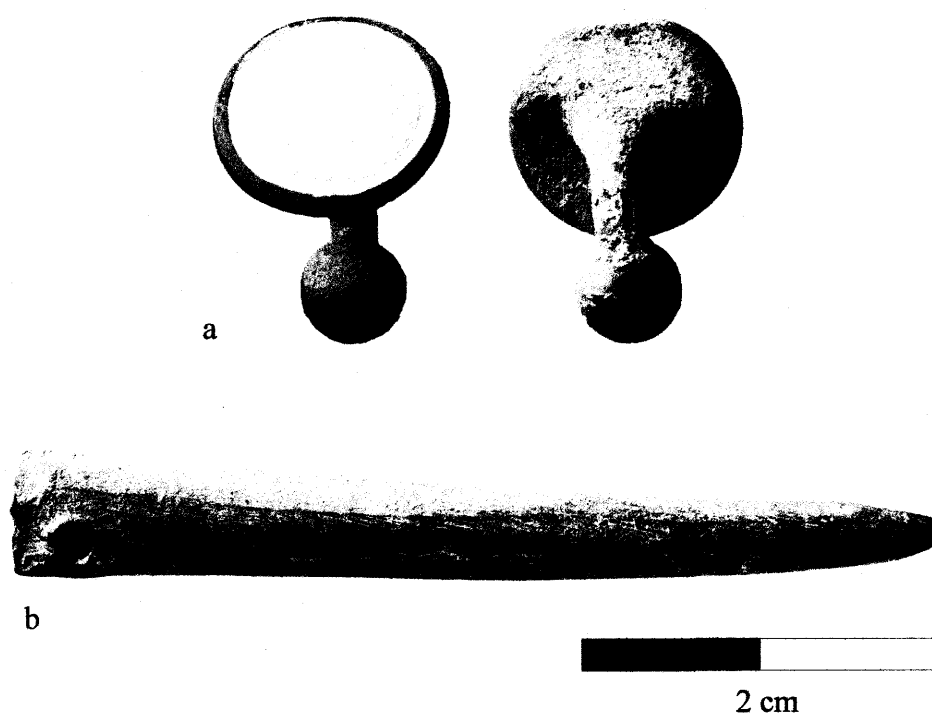


Figure 5.27 Antelope Creek site artifacts. Cufflink: a; perforated lead object: b.

5.5.8 Ceramic Sherds (n=7)

All of the sherds are very small with the largest measuring 3.5 cm by 2.5 cm. The type of dishes represented cannot be determined. Three of the sherds are glazed, cream coloured earthenware with no pattern. Four of the sherds have patterns. Of these, three are decorated with under glaze transfer print and one is flow blue. No maker's marks are present on the sherds. Very little of the patterns is visible and neither the patterns nor dates of manufacture can be determined.

5.5.9 Miscellaneous Metal (n=5)

The miscellaneous metal objects include one 51.4 mm long tapered lead object with a drilled hole near the top (Figure 5.27,b). The top has a diameter of 7.0 mm, and

the tip tapers to 2.0 mm. Four fragments of heavily corroded iron objects have also been collected, and the type of objects they represent is indeterminate.

5.6 Interpretation of Artifact Analysis

Diagnostic artifacts from the Antelope Creek site indicate that this is a multi-component site occupied during the Middle Precontact, Late Precontact period and Historic periods. Many of the artifacts such as endscrapers, bifaces, perforators, and awls recovered from the site are typical of those from a habitation site, but the disturbed nature of the site precludes the reconstruction of activity areas. The artifacts are part of a surface collection, and the lack of context inherent in this type of collection makes it impossible to determine the cultural affiliation of the non-diagnostic artifacts.

The Middle Precontact period in southwestern Saskatchewan dates approximately 7500 to 1950 rcybp (Walker 1999: 25-26). At the Antelope Creek site, it is represented by 27 projectile points including one Early Side-notched, four Oxbow, one Duncan, three Hanna, and 18 Pelican Lake projectile points.

The Late Precontact period is strongly represented, and artifacts diagnostic of the Besant, Avonlea, Old Women's and Mortlach phases have been identified. The majority of projectile points are classified as Besant (n=64). One Besant ceramic vessel was also identified. The Avonlea phase is represented by 26 projectile points and three parallel grooved ceramic vessels.

Prairie Side-notched (n=47) and Plains Side-notched projectile points (n=37) were also collected from the Antelope Creek site. These points are associated with the latest precontact occupations of southwestern Saskatchewan. Old Women's phase

assemblages include both Prairie and Plains Side-notched points while Mortlach phase assemblages are characterized by Plains Side-notched points. The 47 Prairie Side-notched points are part of the Old Women's assemblage, and some of the Plains Side-notched points probably are too. After A.D. 1300 Plains Side-notched points occurred in greater numbers in Old Women's phase assemblages, but the Prairie Side-notched point was never totally replaced (Meyer 1988:56). Some of the Plains Side-notched points are undoubtedly associated with the Mortlach ceramics at the site. Old Women's phase and Mortlach phase assemblages both include Plains Side-notched points, and it is impossible to determine which projectile points are associated with which ceramics. Analysis of the ceramics confirms that both the Old Women's and Mortlach phases are represented.

Artifacts recovered from the Antelope Creek site that are characteristic of Mortlach phase assemblages include Plains Side-notched points, the ice glider and the bifacial endscrapers. Many of the Antelope Creek site ceramics are thin and well made and characteristic of Mortlach assemblages as defined by Walde (1994) and Malainey (1991). Walde (1994) notes that Mortlach assemblages in southern Saskatchewan are commonly characterized by a high frequency of fused shale and Knife River flint projectile points, but this is not the case at the Antelope Creek site.

Both Old Women's and Mortlach materials have been recovered from the Antelope Creek site, but it is impossible to determine if the assemblage represents coterminous or separate occupations. The Sykes site on Swift Current Creek also contained Old Women's and Mortlach materials, but this site was also disturbed, the artifacts collected from a cultivated field (Walde 1994:303). As yet, there is no evidence to indicate whether mixed assemblages such as these represent the coexistence of

Mortlach and Old Women's groups or different occupations at the same site.

Archaeological sites containing Old Women's assemblages were present in southwestern Saskatchewan from about A.D. 800 until 1750, and the range of Mortlach and Old Women's overlaps in southwestern Saskatchewan from ca A.D. 1300 to 1700 (Meyer 1988:61). Future investigations at less disturbed sites may provide more insight into the relationship between these two groups.

The Antelope Creek site assemblage exhibits some traits that are present in Middle Missouri assemblages, but these are common at many sites containing Mortlach components. The presence of bifacial endscrapers is thought to be indicative of trade with Middle Missouri groups (Walde 1994). The brushed surfaces of several of the miscellaneous sherds resemble the exteriors of some Middle Missouri vessels. These may be shared traits or evidence of trade, but it is not necessarily evidence of a Middle Missouri occupation at this site. Mortlach assemblages in southern Saskatchewan often possess traits that are indicative of trade with people from the Middle Missouri region. This is evident at the Long Creek site (Bryant 2002) with the presence of single cord impressed ceramics. Other Mortlach sites that demonstrate Middle Missouri influences include the Evans and Sanderson sites (Malainey 1991:239).

The presence of artifacts such as pipes and the incised tablet suggests ceremonial activities occurred at the site. Ruth and Fulton Heron (personal communication 2001) report that all the pipes were concentrated in one part of the site. The tablet was recovered from an unknown area of the Antelope Creek site. Pipes and tablets often occur in burial contexts, and mounds may also include other artifacts such as shell beads and bird bone whistles (both of which were collected from the Antelope Creek site). The Antelope Creek site tablet and pipes are similar to materials identified by Syms

(1979) as belonging to the Devils Lake-Sourisford Burial complex of the northeastern Plains. This complex is confined primarily between the Aspen parkland and Missouri Coteau of southwestern Manitoba, southeastern Saskatchewan and adjacent North Dakota (Syms 1979:294). Syms (1979:283) considers the Devils Lake-Sourisford Burial complex was left by Siouan peoples who buried their dead primarily in the spring when they were leaving the Aspen Parkland and sheltered valleys. Therefore, it is possible that a burial or other sacred area was present at the Antelope Creek site, although it is outside of the recognized Devils Lake-Sourisford Burial complex area. Unfortunately, the Antelope Creek site is so disturbed that all evidence of such a sacred area is likely destroyed. Future investigations at the site may reveal intact areas; however the area that the pipes were collected from is seasonally inundated by Lake Diefenbaker.

Historic artifacts collected from the Antelope Creek site represent the fur trade, buffalo robe trade, and ranching/homestead eras. Early historic items from the site include the trade bead and three metal projectile points. The gunflint, lock plate and knives may also be remains of the fur trade era. According to Pyszczyk's (1999) criteria the Antelope Creek site metal projectile points likely date after A.D. 1830. This area was also used as ranchland, and homesteads were established in the area in the early 1900s. Many of the historic artifacts including some ammunition, ceramic sherds, and metal fragments date to this time period.

5.7 Summary

The Antelope Creek site is a multi-component site. The majority of the diagnostic precontact period artifacts can be assigned to the Late Precontact period but

27 projectile points represent the Middle Precontact period. The Late Precontact period is represented by ceramics and projectile points diagnostic of the Besant, Avonlea, Old Women's and Mortlach phases. Many of the artifacts at the site such as pottery, bifaces, and endscrapers are typical of those at habitation sites and represent daily activities carried out at such a site.

Unique artifacts including the incised red pipestone tablet and several tubular pipes may represent an area of the site that is of a sacred nature. Pipes, tablets, shell beads and bird bone whistles are often recovered from burial mounds. However, the presence of such a feature at the Antelope Creek site remains speculative because of the lack of context of artifacts and the disturbed nature of the site.

This area of southwestern Saskatchewan was utilized during the fur trade, buffalo robe and ranching/homestead eras. The historic artifacts recovered from the site indicate the area was occupied throughout the historic period. The area has been used as ranchland in the past and until the present time for hunting.

This is a surface collection of artifacts with no context or association, and the non-diagnostic artifacts cannot be assigned to a particular archaeological phase. However, analysis of the artifacts does indicate the cultural chronology at the site and the identification of this site as a habitation site. The presence of both Old Women's and Mortlach materials raises interesting questions about the relationship between the two phases. The lack of context prevents conclusions about whether this mixed assemblage represents separate occupations or the intermingling of the groups responsible for these artifacts.

Chapter 6

Miry Creek Site Artifact Analysis

6.1 Introduction

Artifacts from the Miry Creek site (EeOc-5) are diagnostic of the Middle Precontact to Historic periods. The artifacts collected suggest it is a habitation site, and previous investigations of the site identified many activity areas such as hearths, concentrations of burned and butchered bone, and lithic scatters that are indicative of such an occupation. Several bone tools at the site were manufactured using metal tools indicating the utilization of both Aboriginal and European tools. AMS dates obtained from carbonized food residue from two vessel interiors support the classification of this site as a Late Precontact to Protohistoric period site. The fur trade, homestead/ranching artifacts and modern hunting paraphernalia indicate that the area was utilized well into the time of European contact.

A few artifacts from the Miry Creek site have been discussed in previous publications, but this thesis is the first to discuss the entire Miry Creek site assemblage from the Heron collection. The primary goal is to provide detailed descriptions and illustrations of the pottery from the site and to briefly describe the other artifacts. All artifacts with the exception of fire cracked rock, lithic debitage, and unmodified bone are discussed. These artifacts were rarely collected and because of the unrepresentative sample, they are not included in the analysis.

6.2 Miry Creek Site Pottery Analysis

One hundred and thirty-four vessels were identified on the basis of rim sherds. An additional 1173 miscellaneous sherds that could not be assigned to a particular vessel were also present. Description of the miscellaneous sherds is limited to a discussion of the surface finish and decorative elements. The vessels' traits are summarized in this chapter, and a detailed description and illustration of each is presented in Appendix C. The ceramics in the Miry Creek site collection are assigned to an archaeological phase based on the characteristic attributes they possess. Most of the Miry Creek site ceramics are typical of Mortlach assemblages, but several Old Women's vessels have also been identified.

6.2.1 Old Women's Phase

Vessels 1 to 30 are identified as Old Women's vessels. These vessels are relatively coarse and thick with sparse to heavy quantities of sand and/or grit temper particles in the paste. The pastes of these vessels exhibit varying degrees of blockiness, lamination, and/or exfoliation.

The rim profiles of 73.3% (n=22) of the vessels are unassignable. Vertical rims are present on 23.3% (n=7) of the Old Women's vessels, and 3.3% (n=1) have a slightly angled rim. Angled rim forms are not typical in Old Women's assemblages, but in other respects this vessel resembles an Old Women's vessel. Vessels 18 and 23 with vertical rim profiles may represent conoidal vessels. Conoidal vessels are rare in Old Women's assemblages but have been recovered from Old Women's components at the Tschetter site (Linnamae 1988) and the Head Smashed In site (Walde et al. 1995).

The most common exterior surface treatment of the Miry Creek site Old Women's vessels is vertical cord roughening which is present on 46.7% (n=14) of the vessels. Smoothing obliterated the underlying surface treatment on 36.7% (n=11) of the vessels. The exterior surface finish of 13.3% (n=4) is indeterminate, and 3.3% (n=1) bear fabric impressions.

Decoration is present on 80.0% (n=24) of the vessels, while the remaining 20.0% (n=6) are undecorated. The lip surfaces of 40.0% (n=12) of the Old Women's vessels are decorated. Decorative elements include indeterminate impressions (n=4), CWT impressions (n=3), dentate impressions (n=2), incising (n=1), round edged tool impressions (n=1), and round edged tool impressions combined with CWT impressions (n=1). The outer lip edge of 26.7% (n=8) of the Old Women's vessels are decorated. These decorative elements include notches (n=5), CWT impressions (n=10), pinches (n=1), and incising (n=1). Inner lip edge decoration is present on 6.7% (n=2) of the Old Women's vessels. Both are decorated with notches. The rims of 33.3% (n=10) of the vessels are decorated. Decorative elements include CWT (n=4), stamps (n=1), incising (n=1), fingernail impressions (n=1), finger impressions (n=1) dragged line (n=1), and cord roughening (n=1). Few of the vessels have been reconstructed as far as the neck or shoulders, and, of those, none exhibit decoration.

The primary distinguishing feature of the Miry Creek site Old Women's vessels is the thickness of the sherds and coarse paste texture combined with rim forms and decorative elements that occur in other Old Women's assemblages. The vessels are undecorated or sparsely decorated with a tendency for decoration to be placed on the lip surface or edges. The Miry Creek site Old Women's vessels share general similarities to vessels from other Old Women's sites including the Garratt site (Morgan 1979), the

Saamis site (Milne Brumley 1978), the Sherwin Campbell site (Paquin 1995), the Ross site (Vickers 1989), and the Tschetter site (Prentice 1983, Linnamae 1988).

6.2.2 Mortlach Phase

Vessels 31-134 have been classified as Mortlach. These display a variety of traits that fit with Walde's (1994:101) definition of the Mortlach phase. The Miry Creek Mortlach assemblage is highly variable, but this is common in Mortlach assemblages (Walde 1994; Malainey 1991, 1995). Most of the Miry Creek Mortlach vessels are relatively thin and well made. The paste contains sparse to heavy quantities of grit and/or sand temper particles. Vessels with somewhat coarse textures are still classified as Mortlach if they possess a vessel form and decorative elements typical of Mortlach assemblages. As discussed in Chapter Four, there is a tendency for Mortlach vessels to be thin and compact, but this is not always the case.

The Mortlach vessels from the Miry Creek site are characterized by complex vessel forms with a variety of rim profiles. The rim profile of 50.0% (n=52) of the vessels are unassignable, and 21.2% (n=22) are vertical. Wedge profiles account for 17.3% (n=18) of the Mortlach vessels. The Mortlach assemblage also contains S (3.8%, n=4), excurve (2.1%, n=3), and angled (2.1%, n=3) rim forms.

A variety of surface finishes is also present in this assemblage. Smoothing or decorative elements obliterated the underlying exterior surface treatment of 39.4% (n=41) of the vessels. Vertical cord roughening is present on 25.0% (n=26) of the exterior surfaces. The exterior surface treatment of 16.3% (n=17) of the vessels is

indeterminate. Check stamping is present on 8.7% (n=9) of the vessel exteriors. Fabric impression is present on 6.7% (n=7) of the vessels, and 3.8% (n=4) are simple stamped.

Mortlach ceramics from the Miry Creek site display both sparse and elaborate decoration. Decoration is present on 79.8% (n=83) of the vessels while 21.2% (n=21) are undecorated. The lip surface is the most common place for decoration to occur with 58.7% (n=61) of the vessels exhibiting decorated lip surfaces. The most common lip surface decoration is dentate impressing (57.4%, n=35), followed by CWT (23.0%, n=14). BET impressions are present on 4.9% (n=3) of the decorated lip surfaces. Round edged tool impressions are present on 3.3% (n=2) of the decorated lip surfaces. Indeterminate impressions account for 1.6% (n=1) of the lip surface decoration. Stamps decorate 3.3% (n=2) of the decorated lip surfaces. Punctates, SET, finger pinches, and cord roughening combined with indeterminate impressions each account for 1.6% (n=1) of the decorated lip surfaces.

Decoration rarely occurs on the lip edges of the Miry Creek site Mortlach ceramics. Only 3.8% (n=4) of the vessels are decorated on the outer lip edge. Decorative elements include notches (n=2), SET (n=1) and CWT (n=1). One vessel is decorated with CWT impressions on the inner lip edge.

Decoration is present on 52.9% (n=55) of the rim surfaces. On all but one of the rims, decoration is present on only the exterior of the rim, but vessel 126 is decorated on the rim interior and exterior. Many types of decorative elements are present on the rims of the Miry Creek site Mortlach vessels, and several of the rims bear more than one decorative element. Table 6.1 presents a list of the type of rim decoration.

Table 6.1 Miry Creek site Mortlach vessel rim decoration

Single Decorative Element	# of Vessels	% of decorated rim sherds
BET	1	1.8%
CWT	3	5.5%
dentate	14	25.5%
finger impression	1	1.8%
finger nail	3	5.5%
indeterminate	4	7.7%
poke marks	1	1.8%
punctates	2	3.6%
stamps	8	14.5%
Multiple Decorative Elements		
dentate and finger nail	2	3.6%
dentate and CWT	1	1.8%
finger nail and boss	1	1.8%
CWT and finger nail	1	1.8%
CWT, SET, and drilled hole	1	1.8%
dentate and stamps	3	5.8%
dentate, finger pinching and incising	1	1.8%
dentate and round edged tool	1	1.8%
CWT and drilled holes	1	1.8%
punctates and dentate	1	1.8%
CWT and BET groove	1	1.8%
dentate and finger impressions	2	3.6%
dentate and SET	1	1.8%
SET and CWT	1	1.8%
Total	55	

Seven vessels are decorated on the neck. Decorative elements include dentate impressions (n=3), pokemarks (n=1), CWT (n=1) and dentate combined with drilled holes (n=1). Two of the shoulders are decorated. One bears SET impressions and one BET impressions.

Most of the Miry Creek site ceramics are thin and well-made vessels with rim forms and decorative elements typical of vessels assigned to the Mortlach phase.

Mortlach pottery assemblages are frequently extremely heterogeneous. This

heterogeneity is evident in the Miry Creek site assemblage. A variety of rim forms, surface finishes and decorative elements are represented. The Miry Creek ceramic assemblage is consistent with Malainey's (1991) observations of southern Saskatchewan Mortlach sites that usually have a majority of vertical rim vessels with a significant number of wedge rim profiles. The Miry Creek site wedge profile vessels account for 17.3% (n=18) of the entire Mortlach ceramic assemblage. Wedge profiles are a characteristic Mortlach trait, and Walde (1994:82) notes the tendency for wedge profiles to bear check stamped exterior surfaces and dentate stamped decoration. At the Miry Creek site, three of the wedge rim vessels have check stamped exteriors, and twelve are decorated with dentate impressions.

The Miry Creek assemblage contains undecorated, sparsely decorated, and elaborately decorated Mortlach vessels. Malainey (1991:239) notes that southern Saskatchewan assemblages commonly contain both sparsely and elaborately decorated vessels and such variation is also noted by Walde (1994). Many of the Miry Creek site vessels are similar to vessels from the Mortlach assemblages described by Walde (1994), Malainey (1991), and to other assemblages including the Dune Buggy site in Montana (Johnson 1977), the Evans site in North Dakota (Schneider and Kinney 1978), the Shippe Canyon site in Montana (Joyes 1973), and the Long Creek site in southeastern Saskatchewan (Bryant 2002).

There are also similarities between some of the Miry Creek site and Cluny site ceramics. Vessel 31 is an S rim profile vessel that bears fabric impressing on an extremely plastic surface. This fabric impressed vessel is similar to Vessel 1 from the Cluny site (Forbis 1977:43). Walde (1994:105) suggests the presence of a fabric impressed surface formed on such a plastic surface is one way to differentiate the Cluny

assemblage from Mortlach assemblages as this surface finish is not present in Mortlach assemblages. However, the Miry Creek site provides an example of this vessel style occurring in a Mortlach assemblage. It raises the problem of determining if such variation represents a different cultural occupation of the site or if it is within the normal range of variation of Mortlach assemblages, which are known for their extremely variable nature (Walde 1994; Malainey 1991). There are many general similarities between the Cluny site ceramics and vessels from Mortlach assemblages including exterior surface treatments and decorative techniques. Dentate stamping is a common decorative element and there is also a tendency for dentate impressions to be associated with check stamping (Forbis 1977). Incising, CWT, pinching, and punctation are also present at the Cluny site and in many Mortlach assemblages.

Walde (1994) has argued that the Cluny and Mortlach ceramics are different enough to be assigned to separate archaeological phases. The main distinguishing feature between the Cluny site vessels and Mortlach assemblages is the quality of the vessels and size of decorative elements. Walde (1994:104) notes, "In comparison with Mortlach pottery Cluny ceramics tend to have less compact, more laminated paste. The Cluny vessels overall tend to be less well constructed than their Mortlach counterparts. Similarly, while dentate stamped and CWO impressed decorations are present in both cases, the tools used in decorating Cluny pots tended to be larger and less finely constructed." The presence of less well constructed vessels at the Miry Creek site may be a representation of the skill level of the potter and is not necessarily an indication of a different cultural group. There is not enough evidence to indicate if the vessels from the Miry Creek site that are similar to those from the Cluny site represent a separate archaeological phase. This is an area that requires further research. Detailed

descriptions and illustrations of vessels will allow for meaningful comparisons between site assemblages.

6.2.3 Miscellaneous Sherds

Many sherds collected from the Miry Creek site could not be assigned to a particular vessel. These miscellaneous sherds exhibit a variety of exterior surface finishes. Of the 1140 undecorated miscellaneous sherds, 32.7% (n=373) have exfoliated or indeterminate exteriors and 32.4% (n=369) bear cord roughening. The exterior surfaces of 23.8% (n=271) were smoothed, obliterating the underlying surface impression. Check stamping is present on 5.9% (n=67) of the undecorated exteriors, 2.8% (n=32) are fabric impressed, and 2.5% (n=28) are simple stamped.

The Miry Creek collection also includes 133 miscellaneous decorated sherds. Dentate impressions decorate 79 of these sherds. Other decorative elements include CWT (n=28), BET (n=6), stamps (n=5), incising (n=3), dentate combined with BET impressions (n=3), fingernail impressions (n=2), dentate combined with SET impressions (n=2), punctates (n=2), punctates combined with CWT (n=1), notches (n=1), and indeterminate impressions (n=1).

6.3 Miry Creek Site Lithic Artifacts

The Miry Creek site collection includes many lithic tools. Few pieces of lithic debitage or fire cracked rock are part of the Miry Creek site collection and because of the unrepresentative sample are not included in the artifact analysis. The 1983 ARMS

investigation identified several lithic scatters that appear to be areas where tool manufacturing took place, and fire cracked rock was present in most of the activity areas. The most numerous stone tools collected from the Miry Creek site are the flaked lithic tools. Table 6.2 presents a list of the flaked lithic tools and the type of material they are manufactured from.

Table 6.2 Miry Creek site flaked stone tools

Lithic Material	Flaked Tool Type						Total
	projectile points	bifaces	scrapers	preforms	perforators	MURLs	
agate			1				1
chalcedony	13	2	3			3	21
chert	59	17	21	9	4	10	120
fused shale	50	10		4	2	6	72
Gronlid siltstone	1	1	1		1		4
jasper	2		3	1		2	8
Knife River Flint	14	3	8		1	3	29
moss agate	1						1
obsidian	5	6					11
pebble chert		1	1				2
quartzite		1		1			2
Red River chert	1						1
silicified peat	19	5	2	7			33
silicified wood	5	3	1	1	1		11
Swan River Chert	105	32	7	18	3	15	180
Total	275	81	48	41	12	39	496

6.3.1 Projectile Points (n=275)

Most of the identifiable Miry Creek site projectile points are representative of the Late Precontact period, although the Middle Precontact period is sparsely represented by five projectile points, including one early middle period point, two Oxbow, one Duncan, and one Hanna projectile point. The remaining 196 diagnostic projectile points are representative of the Late Precontact period. Point fragments (n=69) and non-diagnostic projectile points (n=5) were also collected. The type and lithic material of the Miry Creek site projectile points are included in Table 6.3. Figures 6.1 to 6.6 illustrate the Miry Creek site projectile points.

Table 6.3 Miry Creek site projectile points

material	Point Type										Total
	Early middle period	Oxbow	Duncan	Hanna	Besant	Avonlea	Prairie Side-notched	Plains Side-notched	Unidentifiable	Point fragments	
chalcedony	1					2	1	5		4	13
chert		2			1	5	5	33	1	12	59
fused shale							1	34		15	50
Gronlid siltstone										1	1
jasper										2	2
Knife River Flint				1		1		8		4	14
moss agate										1	1
obsidian							2	1	2		5
Red River chert										1	1
silicified peat			1			1	2	10		5	19
silicified wood							2	3			5
Swan River Chert					2	6	15	56	2	24	105
Total	1	2	1	1	3	15	28	150	5	69	275

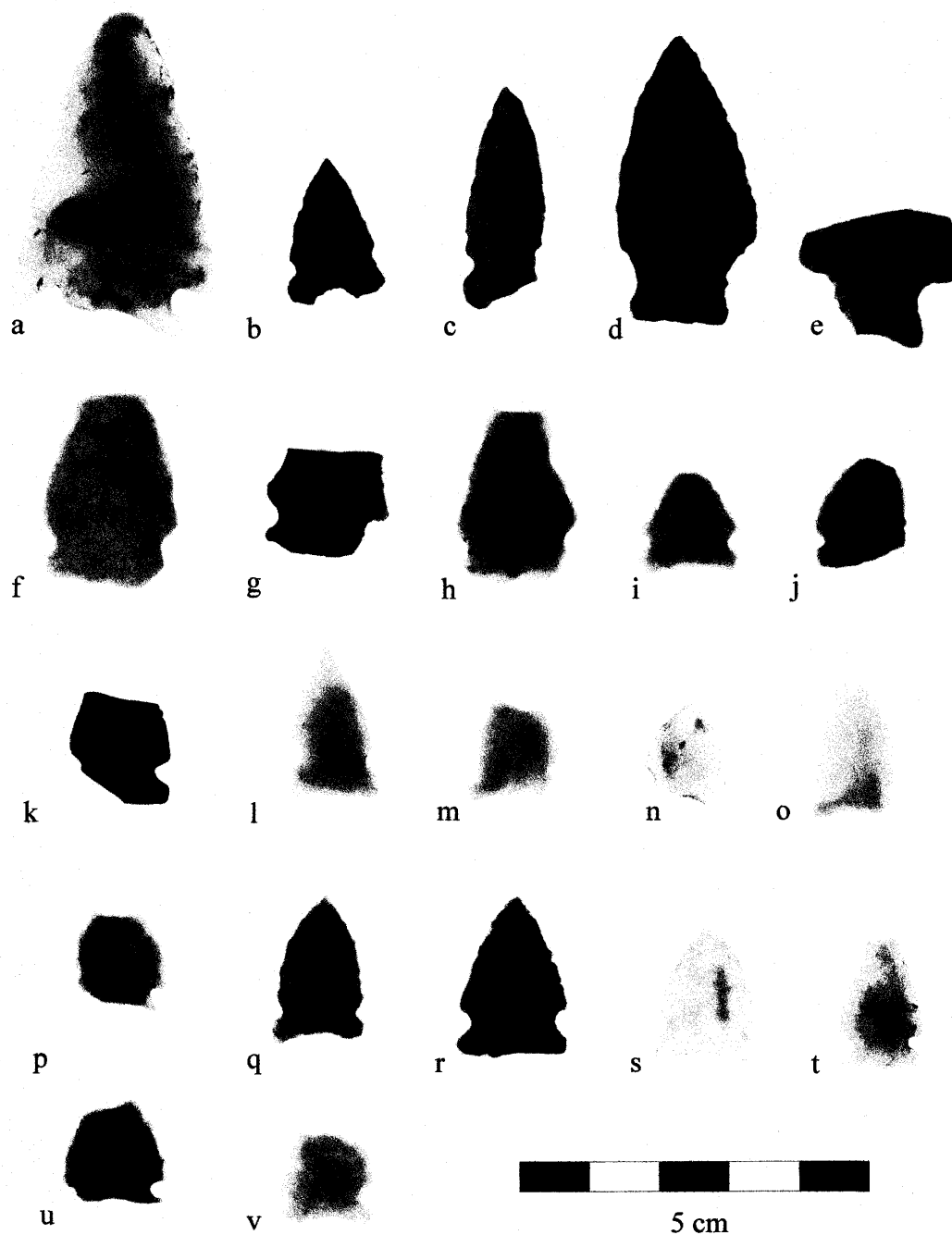


Figure 6.1 Miry Creek site projectile points. Early Middle Period: a; Oxbow: b,c; Duncan: d; Hanna: e; Besant: f-h; Avonlea: i-v.



Figure 6.2 Miry Creek site Prairie Side-notched projectile points.

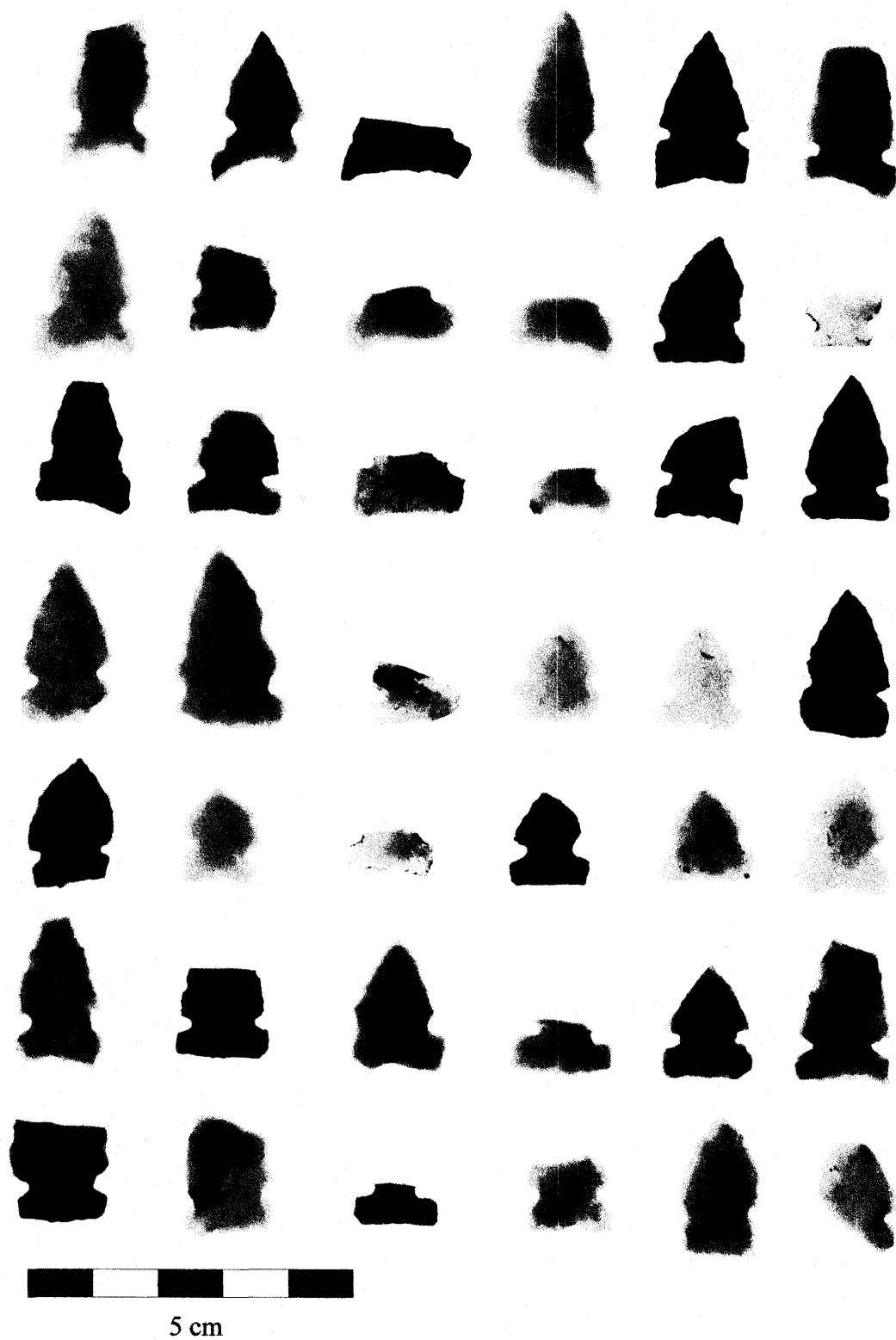


Figure 6.3 Miry Creek site Plains Side-notched projectile points.

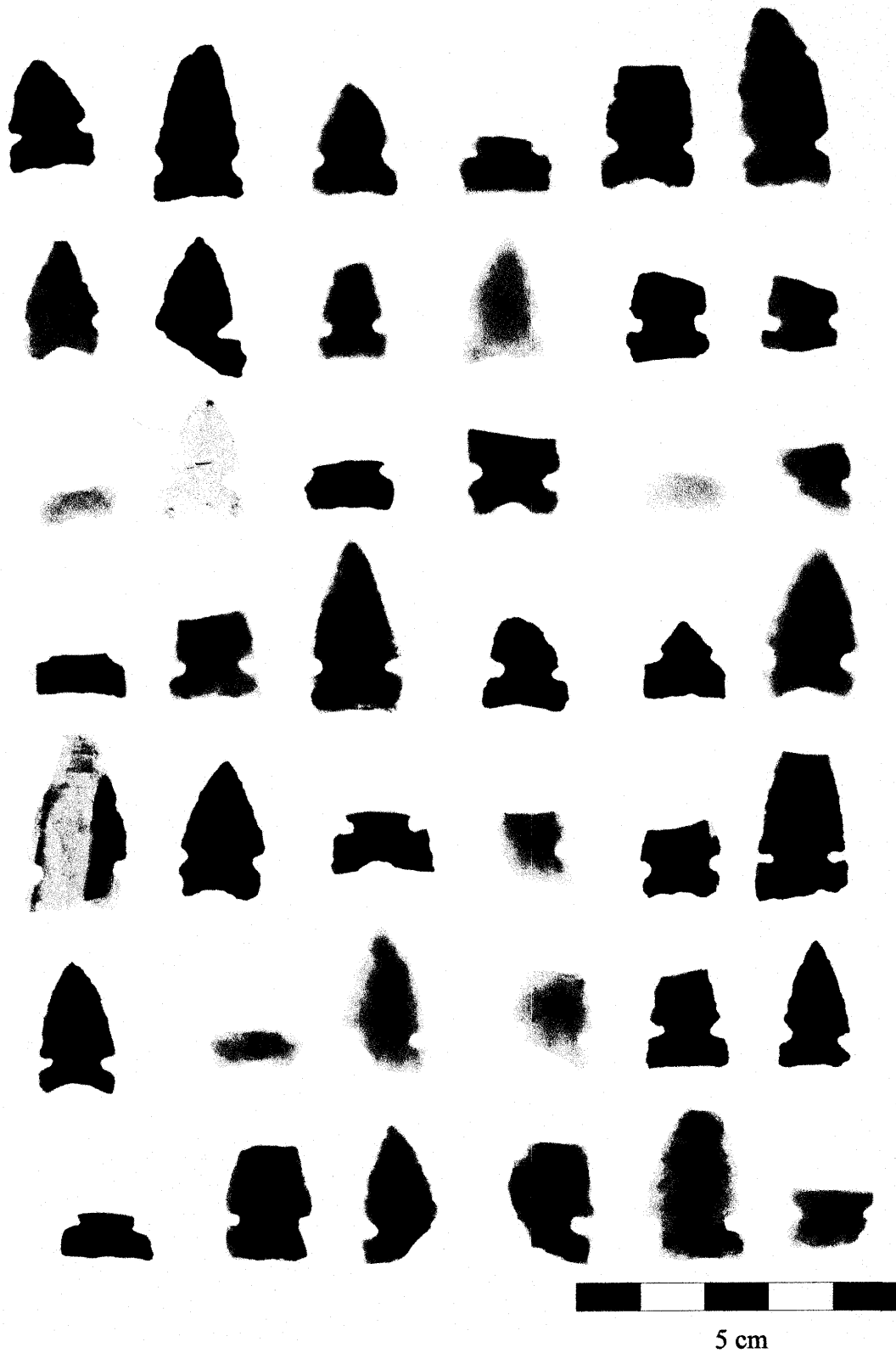


Figure 6.4 Miry Creek site Plains Side-notched projectile points.



Figure 6.5 Miry Creek site Plains Side-notched projectile points.

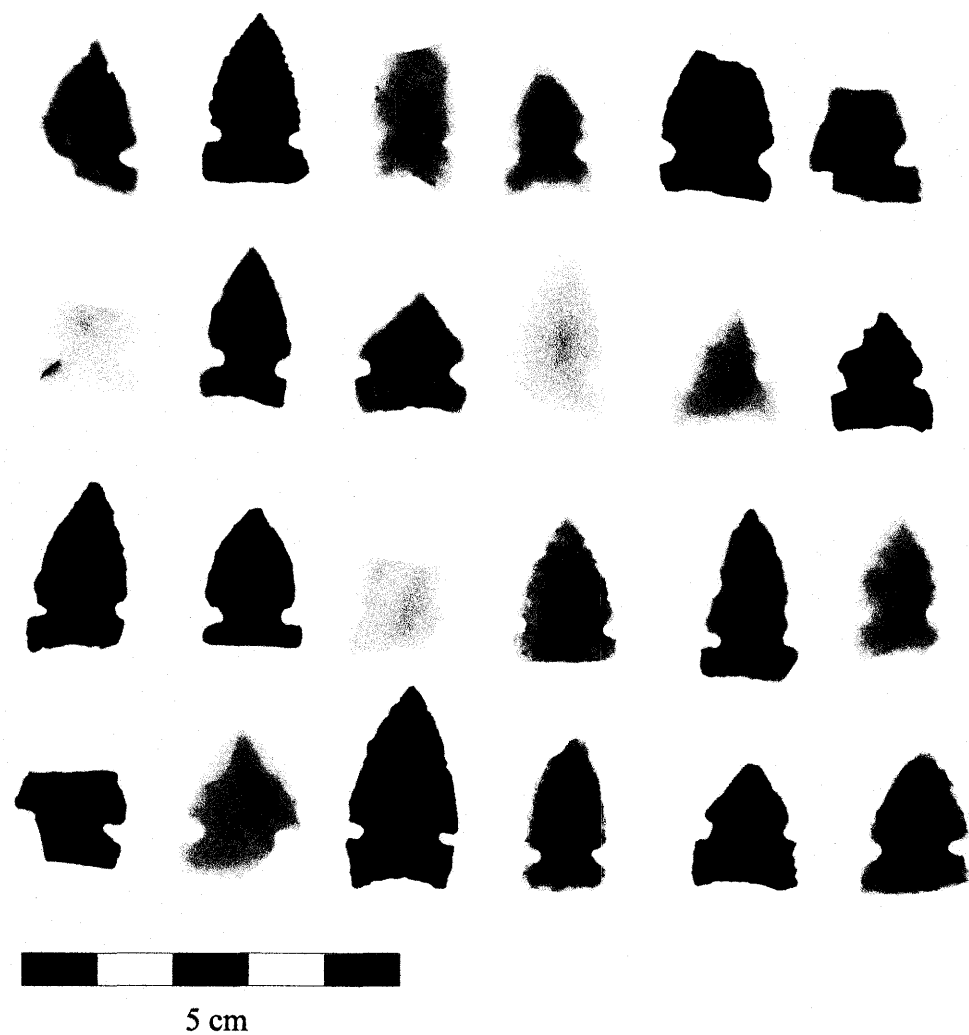


Figure 6.6 Miry Creek site Plains Side-notched projectile points.

6.3.2 Bifaces (n=81)

The Miry Creek site bifaces are worked on both the ventral and dorsal surfaces. They are classified according to the shape of their outline. However, 57 of the bifaces are fragmentary, and the outline cannot be determined. The shape and material type of the bifaces are presented in Table 6.4, and Figure 6.7 illustrates a sample of the Miry Creek site bifaces.

Tables 6.4 Miry Creek site bifaces shape and material type

Lithic Material	Biface Knife Type						Total
	ovoid	discoid	narrow	irregular	hafted	fragments	
chalcedony						2	2
chert					1	16	17
fused shale	2		1		1	6	10
Gronlid siltstone						1	1
Knife River Flint	1				1	1	3
obsidian						6	6
pebble chert				1			1
quartzite	1						1
silicified peat						5	5
silicified wood	1	1	1				3
Swan River Chert	9	2		1		20	32
Total	14	3	2	2	3	57	81

6.3.3 Scrapers (n=48)

The Miry Creek site scrapers are unifacially worked tools (Figure 6.8). Forty-six are endscrapers, and two are classified as miscellaneous scrapers. The endscrapers have a steep working edge on the distal end. The miscellaneous scrapers are also unifacially worked tools, but the outlines are irregular and the working edge is on the lateral edge.

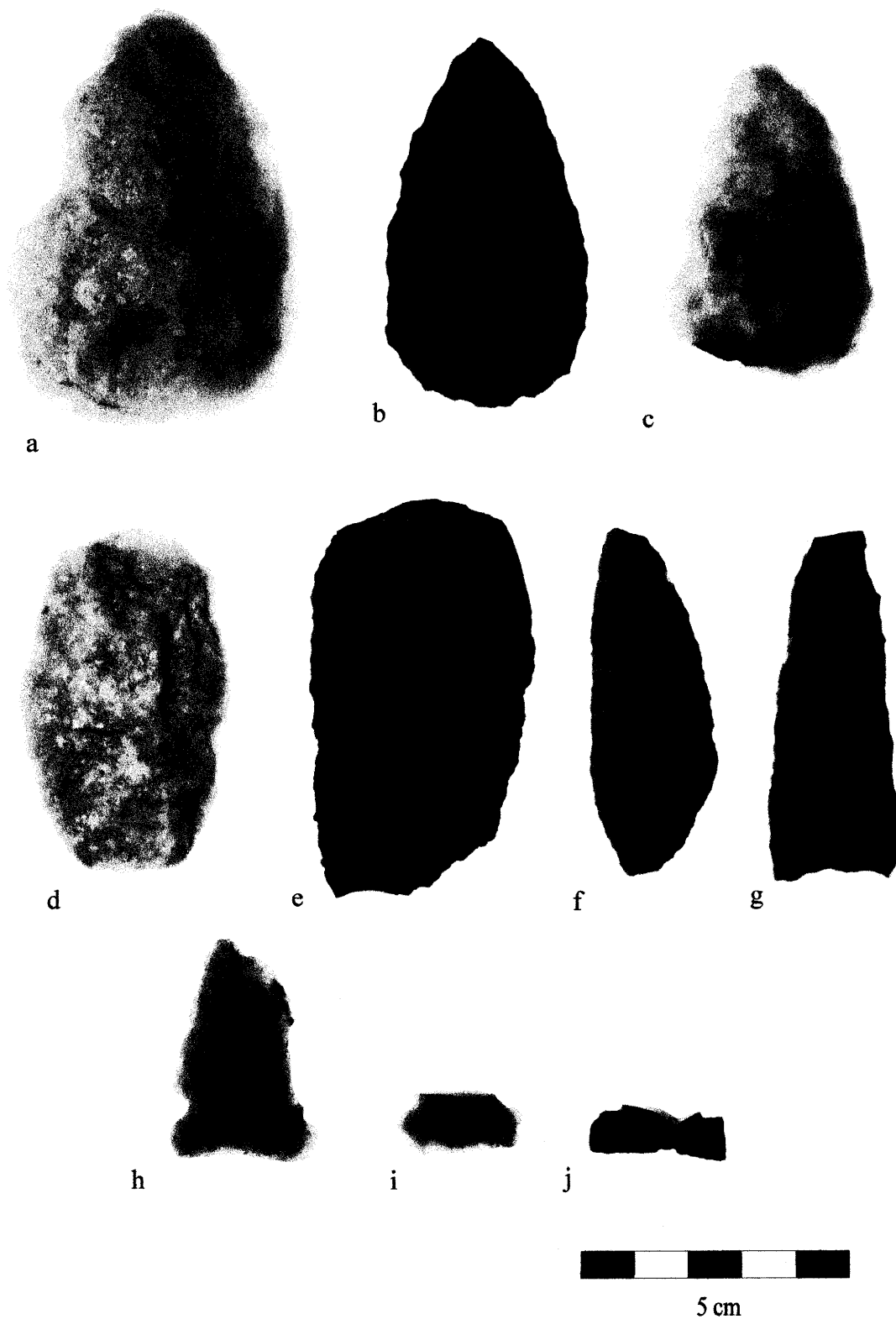


Figure 6.7 Selected Miry Creek bifaces. Ovoid: a-c; discoid: d,e; narrow: f,g; hafted: h-j.

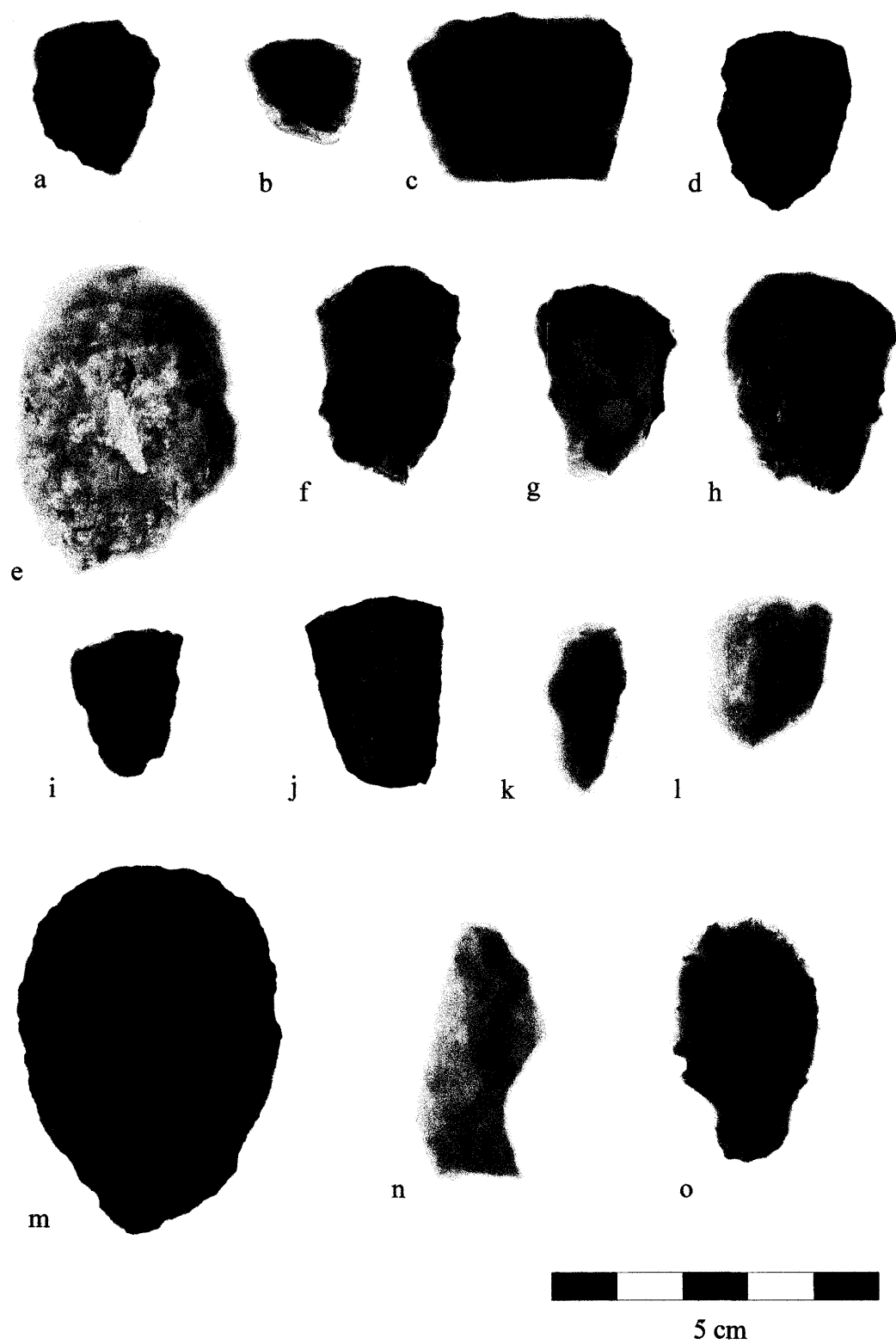


Figure 6.8 Selected Miry Creek scrapers. Endscrapers: a-m; miscellaneous: n, o.

6.3.4 Preforms (n=41)

The Miry Creek site preforms exhibit the general outline of projectile points. They have ovoid or triangular outlines without the hafting element on the base. Figure 6.9 illustrates a sample of the Miry Creek site preforms.

6.3.5 Perforators (n=12)

The Miry Creek site perforators are lithic tools with pointed ends that could be used as engravers or drills to bore holes in materials. Figure 6.9 illustrates a variety of the perforators collected from the Miry Creek site.

6.3.6 MURLs (n=39)

The Miry Creek site MURLs are marginally retouched lithics that exhibit minimal reworking on one or both surfaces. These tools have a variety of shapes and are probably used as expedient tools. Figure 6.9 illustrates a sample of the MURLs collected from the Miry Creek site.

6.3.7 Coarse Stone Tools (n=4)

The coarse stone tools exhibit little modification and are manufactured from coarse grained lithic materials. Three chipping hammers are round cobbles that exhibit battering on one or both ends. They are unmodified other than the battered ends. One of the coarse stone tools is a large quartzite uniface with little modification.

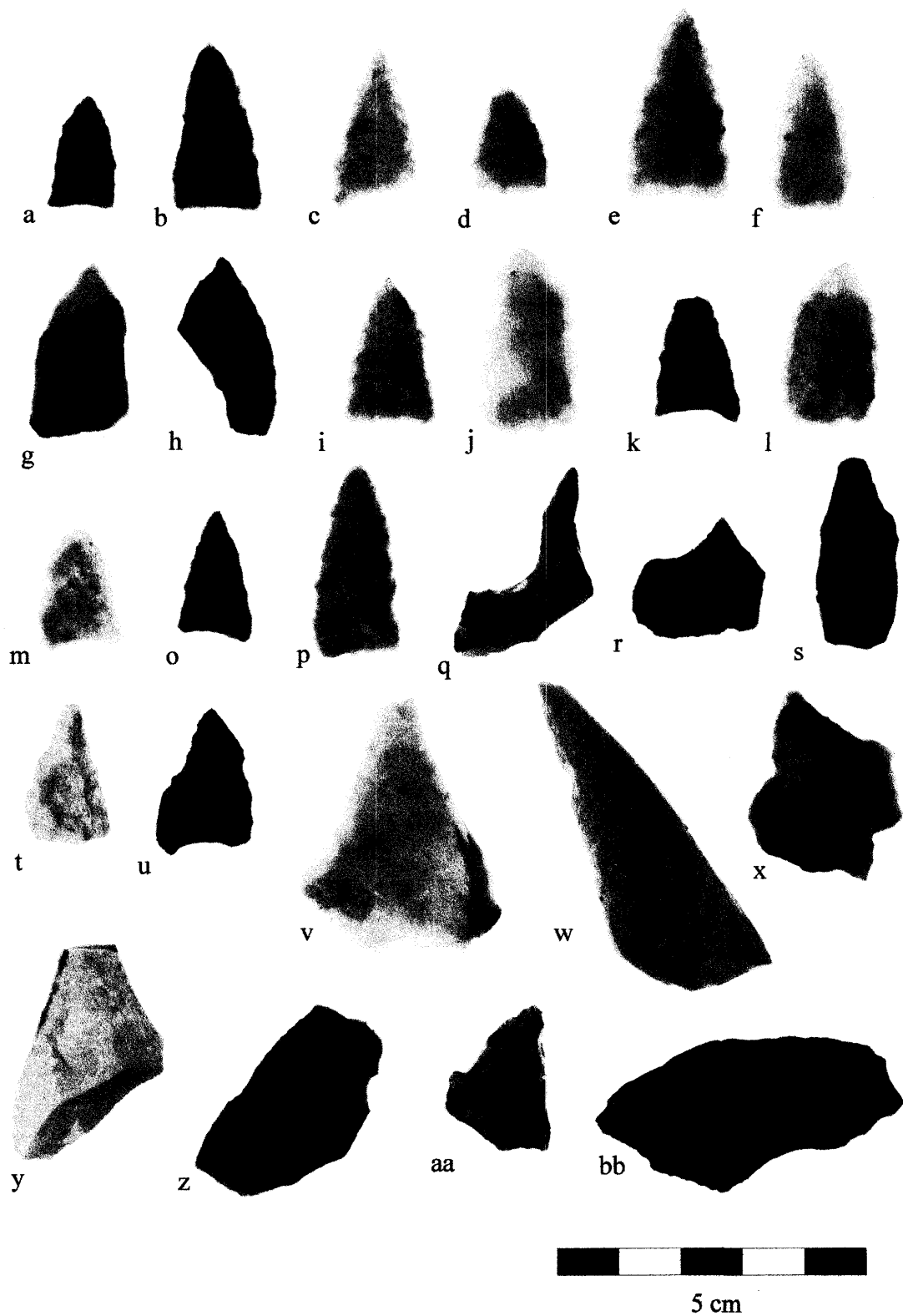


Figure 6.9 Selected Miry Creek flaked lithic artifacts. Preforms: a-p; perforators: q-u; MURLs: v-bb.

6.3.8 Ground/Pecked Stone Tools (n=5)

The ground/pecked stone objects were formed by pecking or grinding the stone to form the tool. A large, 38.3 cm long, granite, tapered cylindrical object that weighs 2.4 kg is probably a large pestle. The 6.8 cm wide, flat end shows evidence of use, and the tapered end narrows to 3.5cm (Figure 6.10). One small grooved maul weighs 180.4 g and exhibits a $\frac{3}{4}$ groove (Figure 6.11,d). Three sandstone abraders were also collected (Figure 6.11, a-c).

6.3.9 Pipe Sherds (n=30)

One blackened, grey steatite sherd appears to represent a pipe bowl. Nine sandstone sherds, including several that are conjoinable, represent one pipe, but such a small portion is represented that nothing can be said about the form of the pipe. An encrustation of carbon residue coats four of the sherds. Twenty sherds of unidentified stone that probably represent one pipe were also collected.

6.3.10 Red Pipestone Bead (n=1) and Red Pipestone Fragments (n=12)

One tiny red pipestone bead with an incised line and drilled hole is present in the collection (Figure 6.12). This bead is manufactured on a 1.0 mm thick piece of red pipestone. Twelve fragments may be leftover from the manufacture of objects.

6.3.11 Stone Disc (n=1)

This 5.3 gram stone disc is made from a soft red stone (Figure 6.13). The edges are ground and polished. It is 4.6 to 8.5 mm thick with a 25.1 mm diameter and a 4.4 mm wide hole drilled through the centre.

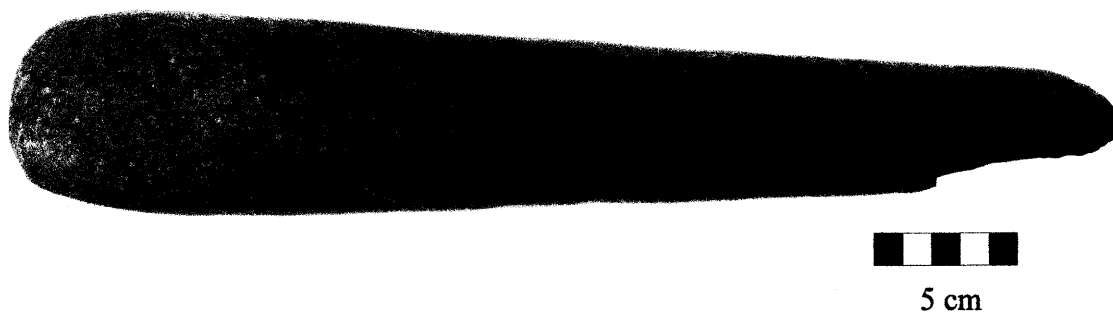


Figure 6.10 Miry Creek site pestle.

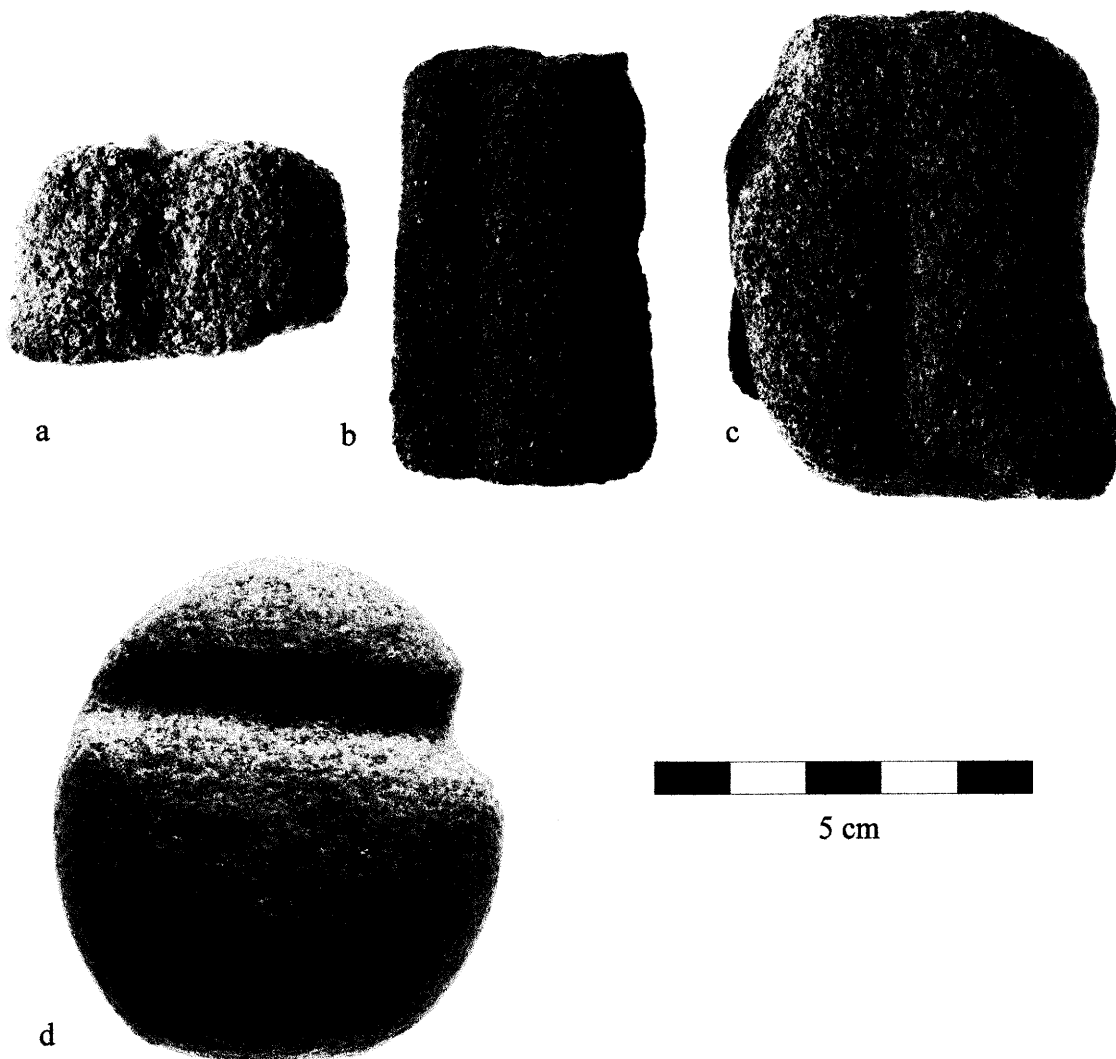


Figure 6.11 Miry Creek site pecked/ground stone tools. Abraders: a-c; grooved maul: d.

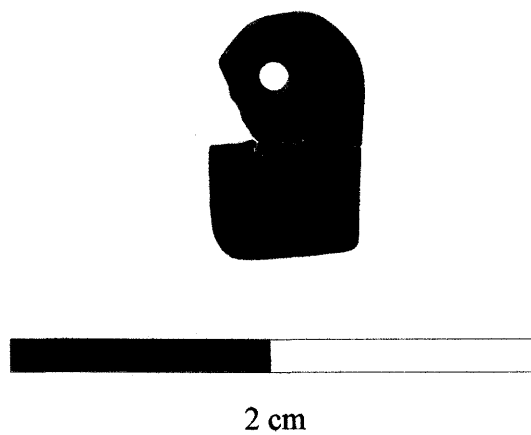


Figure 6.12 Miry Creek site red pipestone bead.

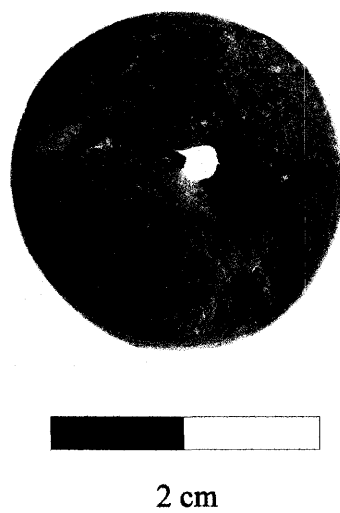


Figure 6.13 Miry Creek site stone disc.

6.4 Bone and Shell Artifacts

Faunal materials were usually collected from the Miry Creek site only if they exhibited evidence of modification. Bone and shell artifacts in the Herons' Miry Creek collection include fleshers, awls, spatulas, cut and polished bird bone, and decorative items including shell beads and perforated mammal teeth. The 1983 ARMS investigation reported the presence of many faunal materials on the site surface. Many bones were burned and exhibited cut marks from butchering. Many small fragments of burned and unburned bones scattered the site surface.

6.4.1 Fleshers (n=4)

The Miry Creek site fleshers are manufactured from the long bones of large mammals (Figure 6.14). The distal ends have been split longitudinally and notched to create a serrated working edge. One of the fleshers (Figure 6.14,d) is manufactured from the left metatarsal of a elk and three from the left metatarsals of bison (Figure 6.14,a-c). The split distal ends of the elk flesher and two of the three bison fleshers bear striations that were produced by sawing the bone with a metal saw. The occupants of the site were using metal tools to manufacture these fleshers. These tools provide unequivocal evidence of the utilization of both Aboriginal and European goods at the site, indicating this site was occupied at least until the Protohistoric period.

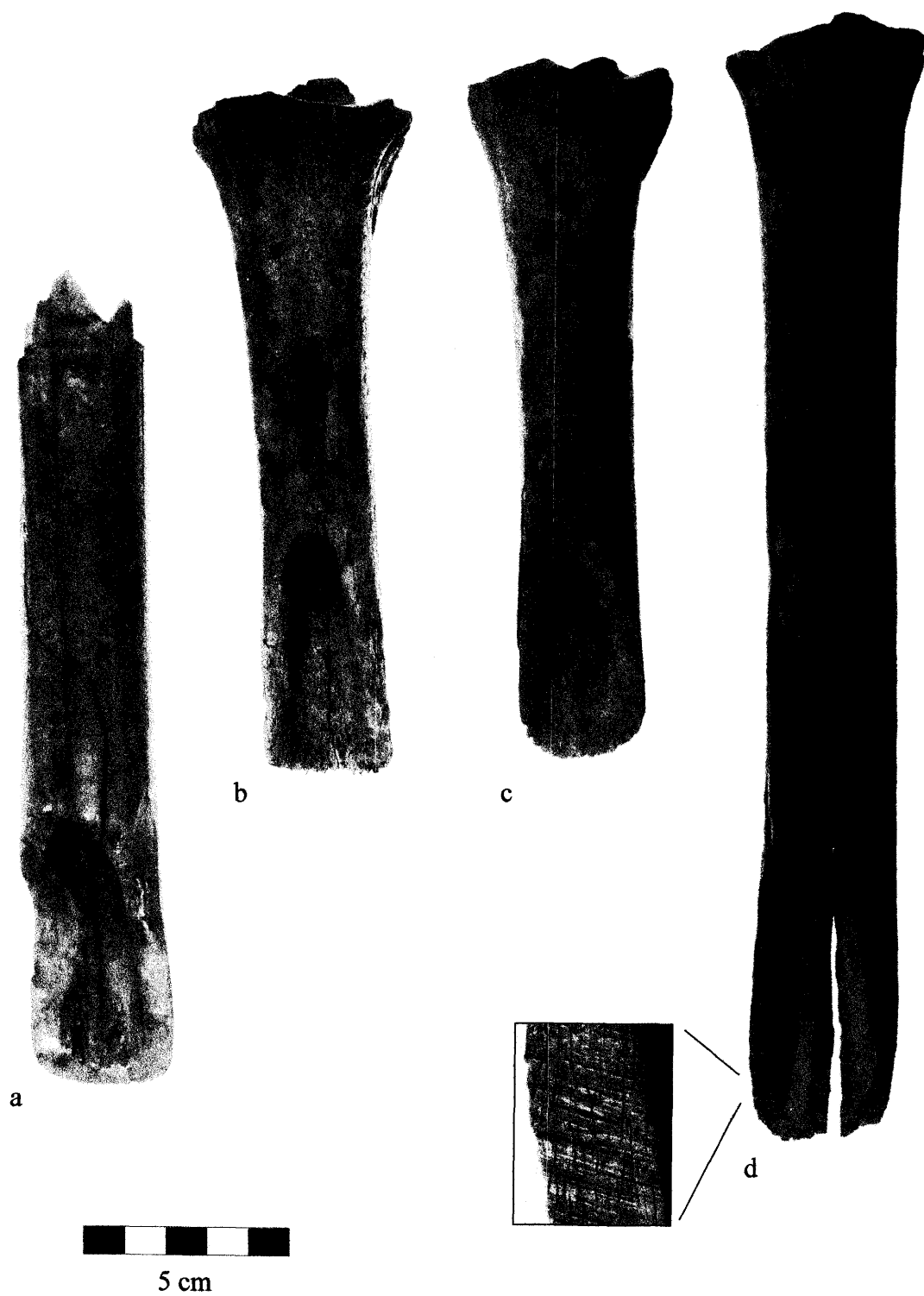


Figure 6.14 Miry Creek site bone fleshers (inset shows an example of saw marks).

6.4.2 Spatulas (n=7)

The Miry Creek site spatulas are manufactured from portions of ungulate ribs (Figure 6.15). They have rounded ends and range from 12.7 to 22.8 cm long.

6.4.3 Awls (n=8)

The awls are fragments of bones that are tapered to create a sharp point on one end (Figure 6.16). These may have been used as perforators to make holes in soft materials such as hides. The awls are manufactured from ungulate ribs (n=2) (Figure 6.16, c,d), ungulate distal metapodials (n=2) (Figure 6.16, a,b), and unidentified bone fragments (n=4) (Figure 6.16, e-h).

6.4.4 Bird Bone (n=9)

Two incomplete bird bone whistles are manufactured from the long bones of unidentified species of large bird (Figure 6.17,a,f). Four long bone fragments of unidentified species of birds were also collected (Figure 6.17,a-d). These cut and polished fragments of bird bone are probably decorative objects

Three bones with saw marks are associated with the site's historic component. A left and right proximal humerus and a right proximal femur with butchering marks have been identified as domestic chicken (*Gallus gallus*).



Figure 6.15 Miry Creek site rib spatulas.

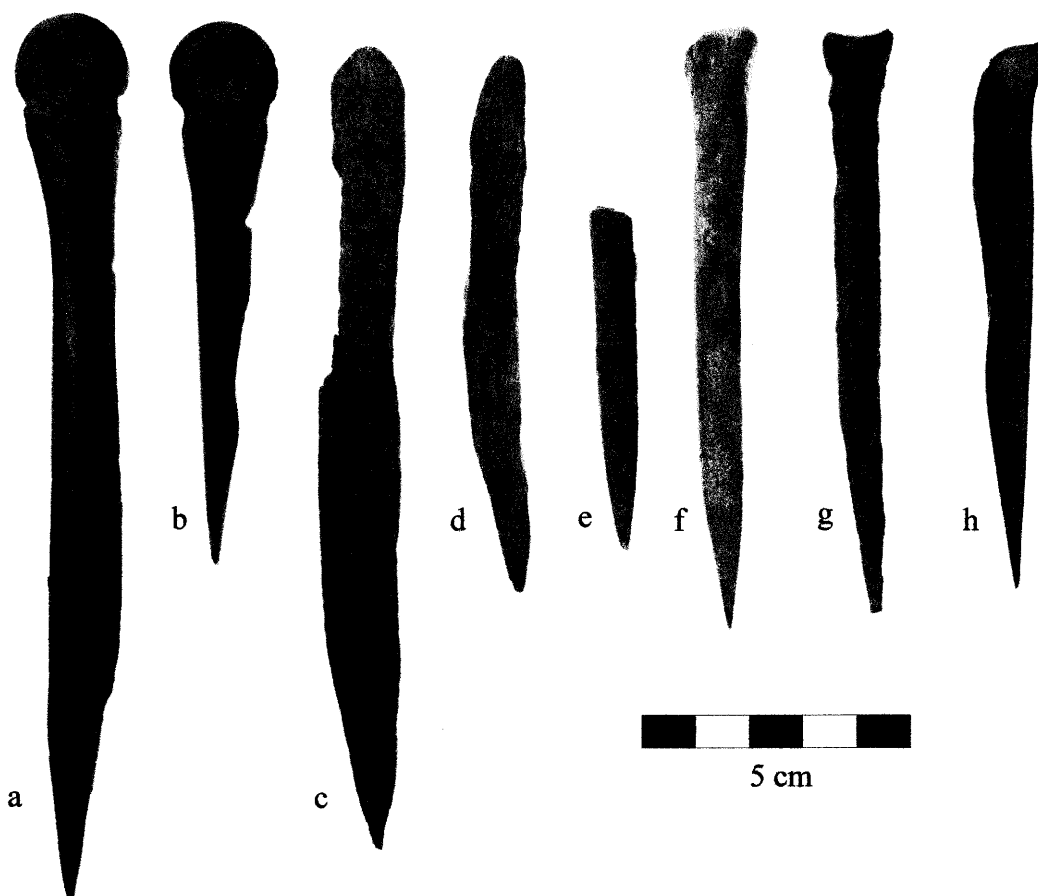


Figure 6.16 Miry Creek site bone awls.

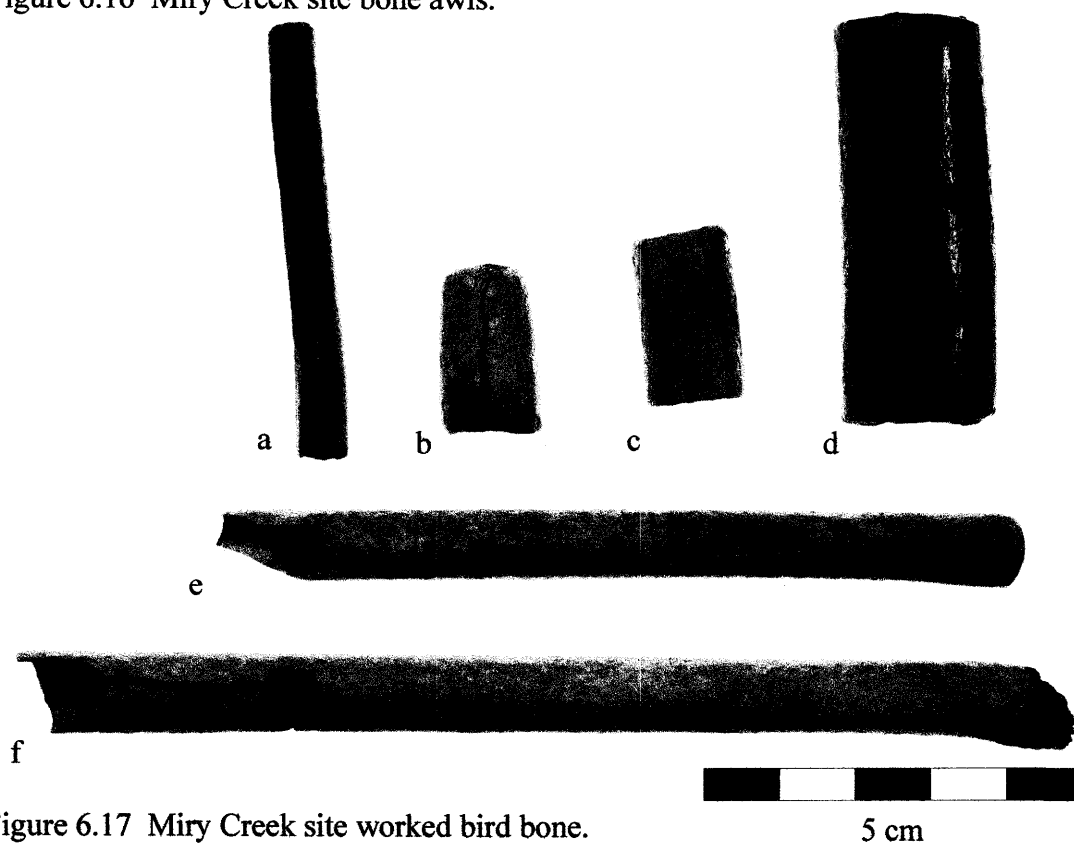


Figure 6.17 Miry Creek site worked bird bone.

6.4.5 Perforated Teeth (n=2)

Two perforated teeth that were used as decorative items have been collected from the Miry Creek site (Figure 6.18). One elk canine has a drilled hole in the root, and the incisor of a large ungulate also has a perforated root. Wood (1957:381) notes that the perforated canines of mammals are nearly universal among the costumes of North American Aborigines. Elk teeth are often used in large numbers to decorate women's costumes, and they are rarely worn by men except in necklaces (Wood 1957:382).

6.4.6 Miscellaneous Bone (n=1)

One fragment of an ungulate rib exhibits cut marks on the dorsal surface. It is otherwise unmodified.

6.4.7 Shell Artifacts (n=52)

Seventeen shell beads with drilled holes are represented (Figure 6.19). The edges of fourteen of the beads have been ground creating symmetrical discs and three beads have unground, asymmetrical outlines. Two bead blanks are also represented. One is an undrilled disc, and the other exhibits two partially drilled holes and an irregular outline. Thirty-three fragments of shell have also been collected. These may be the remainders of bead production activities.

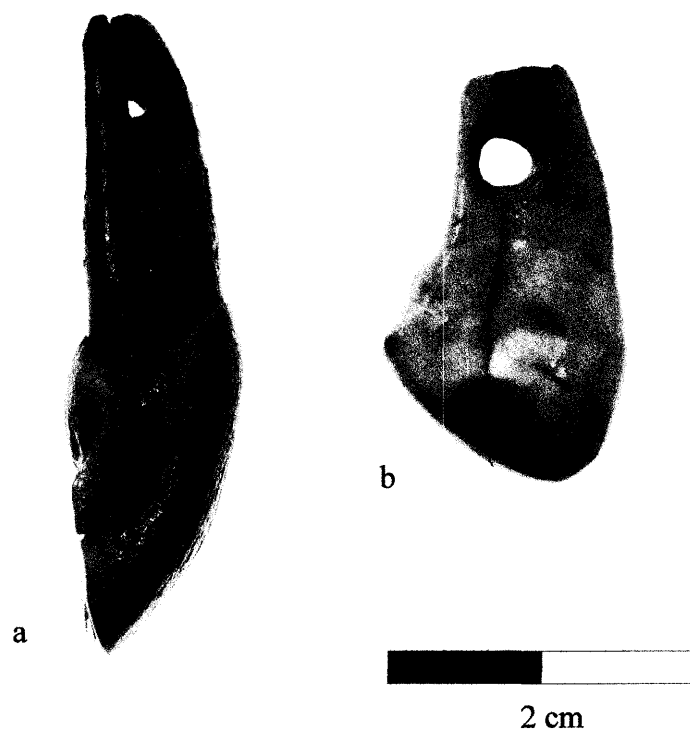


Figure 6.18 Miry Creek site perforated teeth. Ungulate incisor: a; elk canine: b.

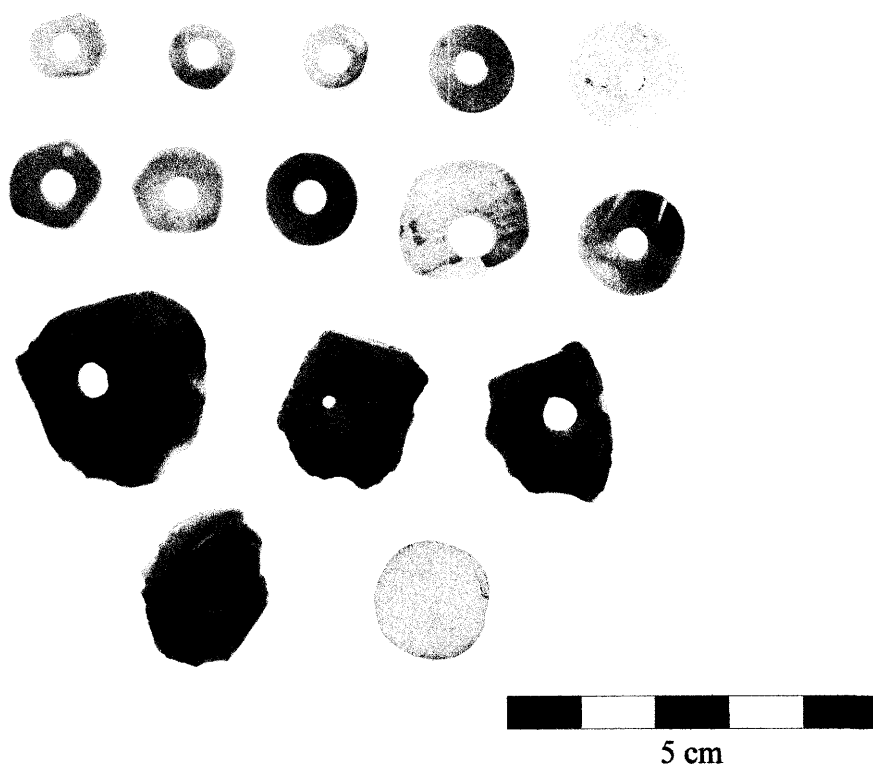


Figure 6.19 Miry Creek site shell beads.

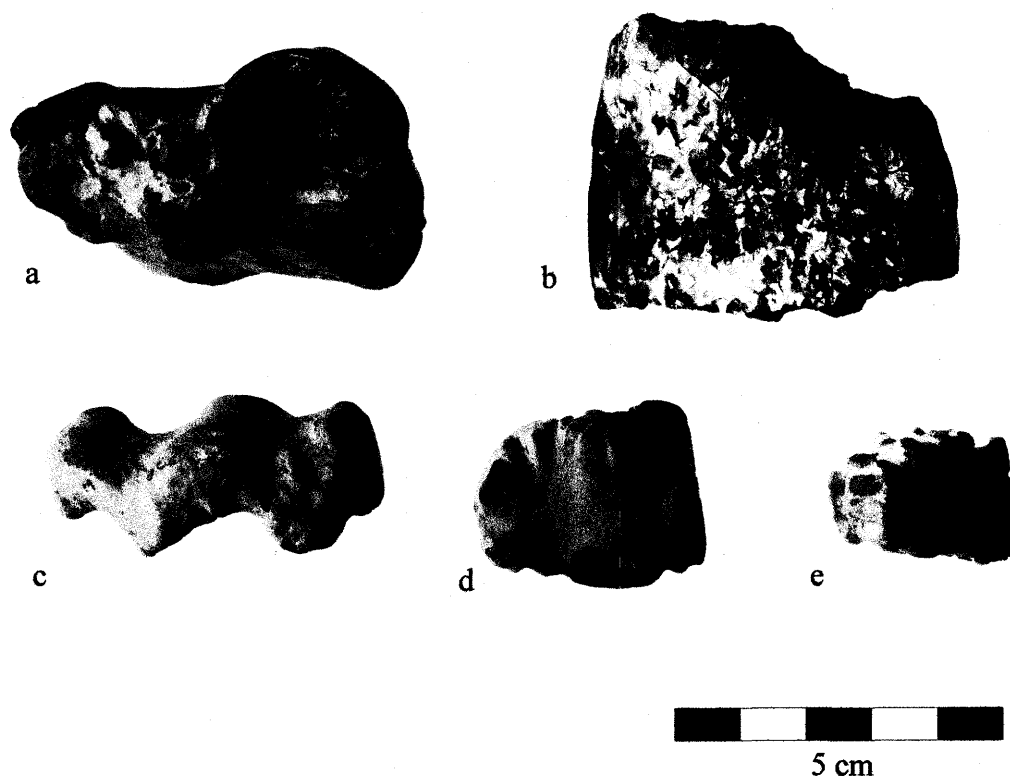


Figure 6.20 Miry Creek site fossils.

6.5 Fossils (n=10)

Five complete fossil segments and five small fragments of fossils were collected from the Miry Creek site (Figure 6.20). One of them is coated with red ochre (Figure 6.20,d). This indicates it is an item of a special nature. Fossils recovered from an archaeological context are often referred to as *Iniskim*. *Iniskim* is a Nitsitapii (Blackfoot) term meaning buffalo stone (Peck 2002:148). It usually refers to fossil ammonite segments that are shaped like bison. Peck (2002:148) notes that there are ethnographic records of many Northern Plains people using ammonites for a variety of purposes, but no First Nation group shows as strong a tradition surrounding the use of ammonites as the Nitsitapii. "Ethnohistoric data suggest that ammonites have been used in personal bundles, sacred tipi bundles, and society bundles. Their function in these

bundles includes access to sacred power for bison charming, tobacco planting, good luck, health and prosperity among other functions” (Peck 2002:160). Iniskim are often recovered from Old Women’s occupations, but they are also recovered from other archaeological components.

6.6 Historic Artifacts

Numerous historic artifacts have been collected from the Miry Creek site. These artifacts include European trade goods and materials that can be assigned to the early homestead and ranching period. A ranch was located at the mouth of the Miry Creek and there were several buildings at the site.

6.6.1 Trade Beads (n=71)

A variety of trade beads have been collected from the site. Figure 6.21 illustrates the beads collected from the Miry Creek site.

6.6.2 Tinkling Cones (n=3)

The tinkling cones are conical items used as decorative objects. One brass cone has a hook at the top and a pattern embossed into the metal (Figure 6.21,a). It appears to have been cut from a scrap of metal. One is plain brass (Figure 6.21,b), and the other is made from a piece of rolled lead (Figure 6.21,c).



Figure 6.21 Miry Creek site trade beads and tinkling cones (beads strung on wire for display).

6.6.3 Metal Projectile Points (n=25)

The occupants of this site made use of metal projectile points (Figure 6.22,a-y). Twenty-one of the points are ferrous metal and four are non-ferrous. Several of the points appear to be machine manufactured while others were cut out of scrap metal. A variety of sizes of points were collected from the Miry Creek site. According to Pysczyk's (1999) criteria, the range in size of these projectile points indicate that they were manufactured from the Protohistoric period to the mid 1800s.

6.6.4 Metal Point/Tinkling Cone Manufacturing Scraps (n=2)

Two pieces of metal may be remnants of projectile point or tinkling cone manufacturing (Figure 6.22,z, aa). The thin brass pieces have triangular shapes cut out of them. Incised lines are visible where it appears that the outline of the object was

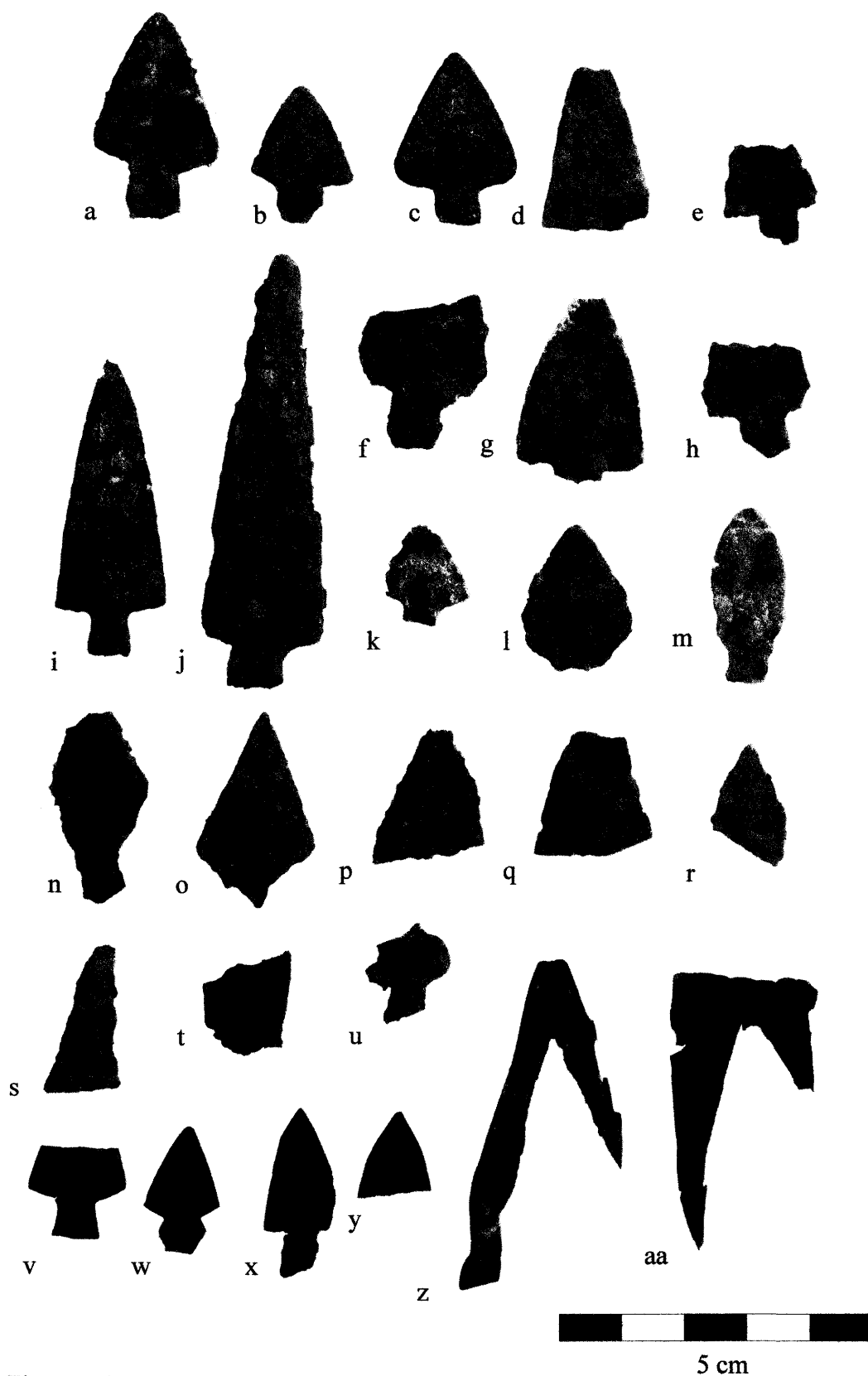


Figure 6.22 Miry Creek site metal projectile points.

scratched onto the surface of the metal.

6.6.5 Arms and Ammunition (n=196)

Much ammunition and several gun parts were collected from the Miry Creek site (Figure 6.23). A list of these is presented in Table 6.5. These artifacts indicate the site was used from the fur trade to the late twentieth century. Many of these artifacts are consistent with the homestead era, and modern ammunition, such as the shot shells and rifle cartridges, indicates that this has been a popular area for hunting.

Table 6.5 Miry Creek site arms and ammunition.

Ammunition	
Cartridges	
10 gauge shot shells	2
12 gauge shot shells	40
16 gauge shot shells	5
20 gauge shot shells	1
.22 calibre cartridge case	19
.25 calibre cartridge case	2
.30 calibre cartridge case	2
.32 calibre cartridge case	1
.300 calibre cartridge case	1
.303 calibre cartridge case	4
.44 calibre centre fire cartridge case unidentified type	1
.44 calibre rim fire cartridge case Henry	2
.455 calibre cartridge case	2
indeterminate calibre cartridge case	2
Bullets	24
Musket ball	1
lead shot	80
steel shot	1
Gun Parts	
butt plate	3
lock plate	1
revolver barrel	1
Gun Flint	1
Total	196

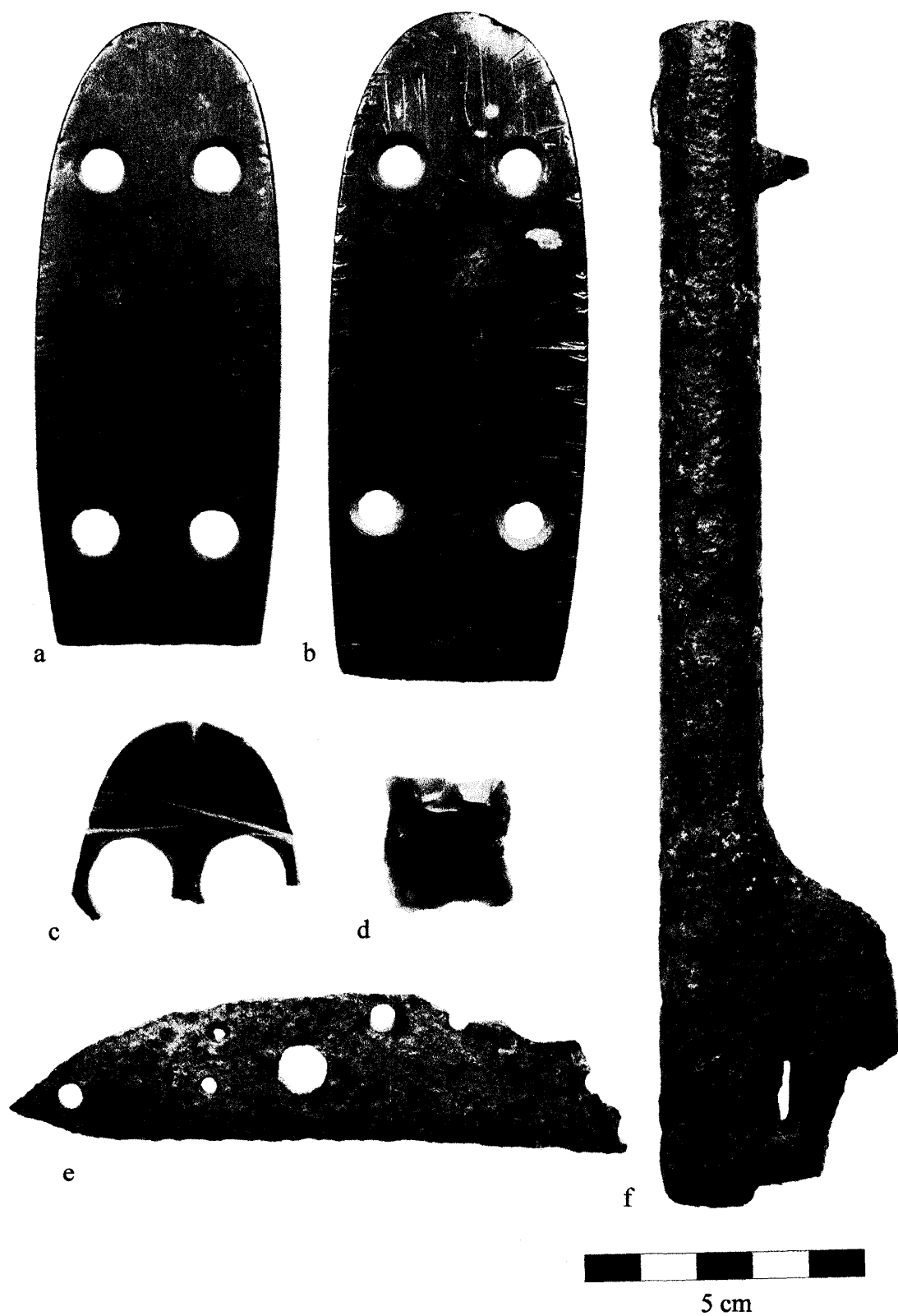


Figure 6.23 Miry Creek site firearms. Butt plates: a-c; flint: d; lockplate: e; barrel: f.

The types of guns that the three butt plates come from have not been identified. The revolver barrel is identical to a Colt Model 1860 Army revolver. These were the principal revolver of the U.S. Civil War, and were manufactured from about 1860 to 1873 (Traister 1989:80). The lock plate is incomplete, has no manufacturer's mark and is similar to the lock plate of many flintlock and percussion cap guns.

6.6.6 Miscellaneous Personal Items (n=3)

Figure 6.24 illustrates the miscellaneous personal items collected from the Miry Creek site. These include a hat pin, a fragment of a vulcanized rubber comb, and a clay marble with a 13.5 mm diameter.

6.6.7 Historic Pipe (n=1)

A yellowish brown clay pipe is a stub-stemmed pipe similar to the one described from the Antelope Creek site (Figure 6.24,c).

6.6.8 Buttons (n=31)

The buttons from the Miry Creek site are manufactured from a variety of materials including metal, glass, shell, ceramic and synthetic materials. Figure 6.25 illustrates a metal button with the American Union eagle. This button has a 20.0 mm diameter, and the back of the button is stamped with "WATERBURY BUTTON CO". This type of button was a U.S. Army General Service button (Smith Albert and Kent 1949:356). It was used on, but not exclusive to, uniforms in the U.S Civil War of 1861 to 1865.

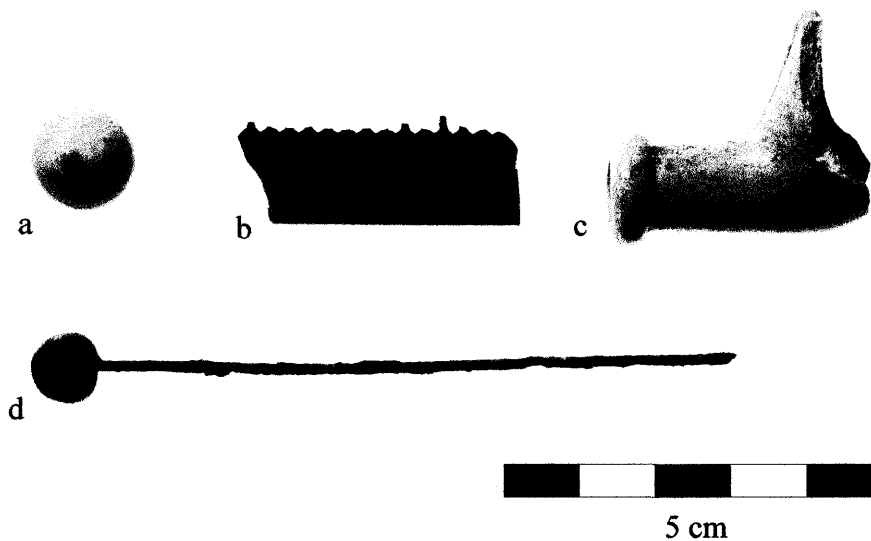


Figure 6.24 Miry Creek site miscellaneous personal items. Marble: a; comb: b; pipe stem: c; hat pin: d.

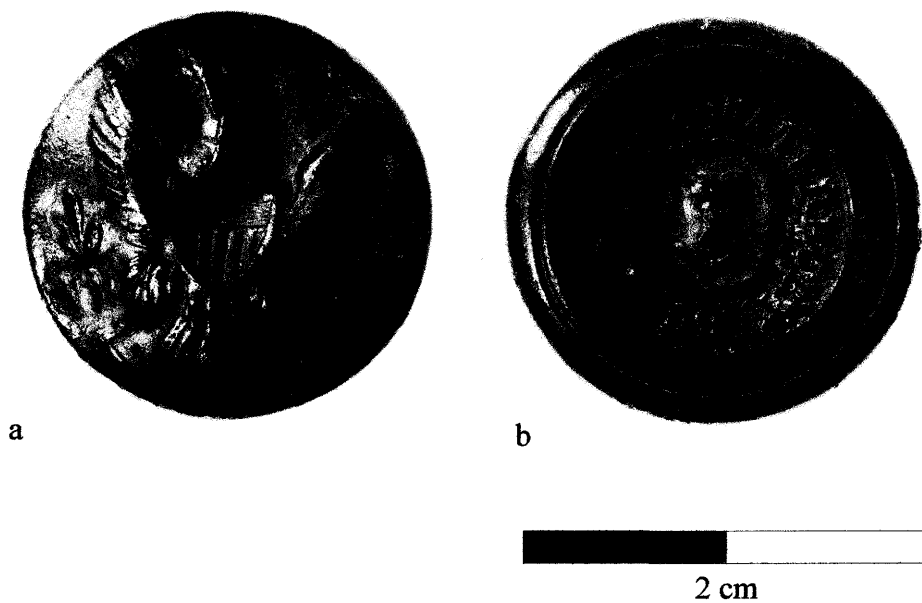


Figure 6.25 Miry Creek site 'Waterbury Button Co' U.S. Army General Service button. Front: a; back: b.

6.6.9 Glass Bottles and Sherds (n=11)

One sherd of green glass exhibits bifacial flaking (Figure 6.26,a). The sherd displays a trace of a maker's mark on the bottom but the maker cannot be identified.

A piece of clear glass has also been worked (Figure 6.26,b). This thin sherd of flat glass is 1.5 mm thick. The edges have been chipped and an eared portion has been created. This may represent a pendant of some sort. The artifact is incomplete so little can be said about its shape.

Portions of four bottles were also collected (Figure 6.27). There is one clear glass bottle, the large neck of a clear glass bottle, the neck/shoulder and base of a brown bottle, and the base of a clear glass bottle. Five small sherds were also collected including three clear, one blue, and one white.

6.6.10 Hardware and Tools (n=7)

Two butt hinges, one of ferrous and the other of non-ferrous metal (Figure 6.28,c,d), and two links of a non-ferrous metal chain were collected. A portion of a coarse-grained disc may represent a historic sharpening or grinding stone (Figure 6.28,e). An iron axe head (Figure 6.28,f) and an iron file (Figure 6.28,a) were also collected from the site. There is also an unidentified piece of iron hardware.

6.6.11 Copper Container

Two large fragments of heavily patinated copper represent a copper container (Figure 6.29).

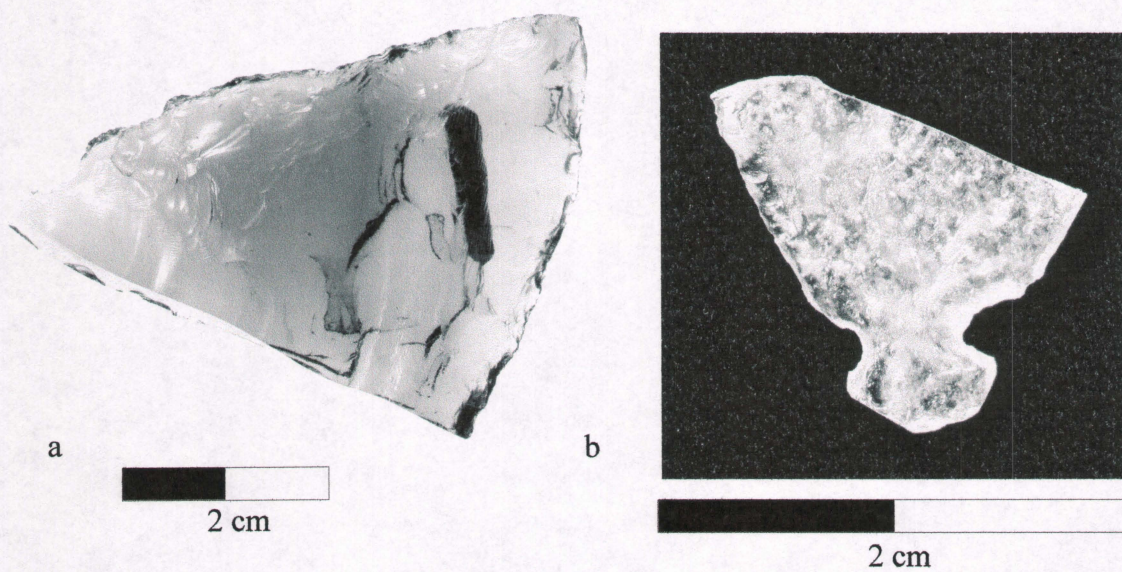


Figure 6.26 Miry Creek site worked glass.

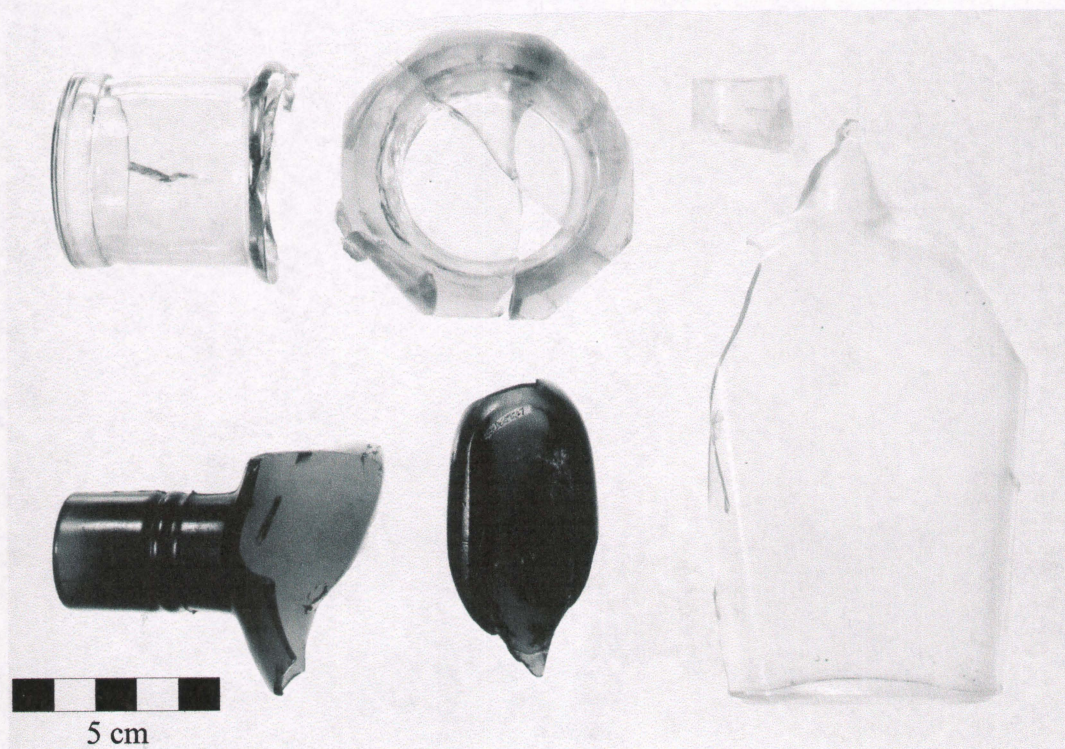


Figure 6.27 Miry Creek site glass bottles.

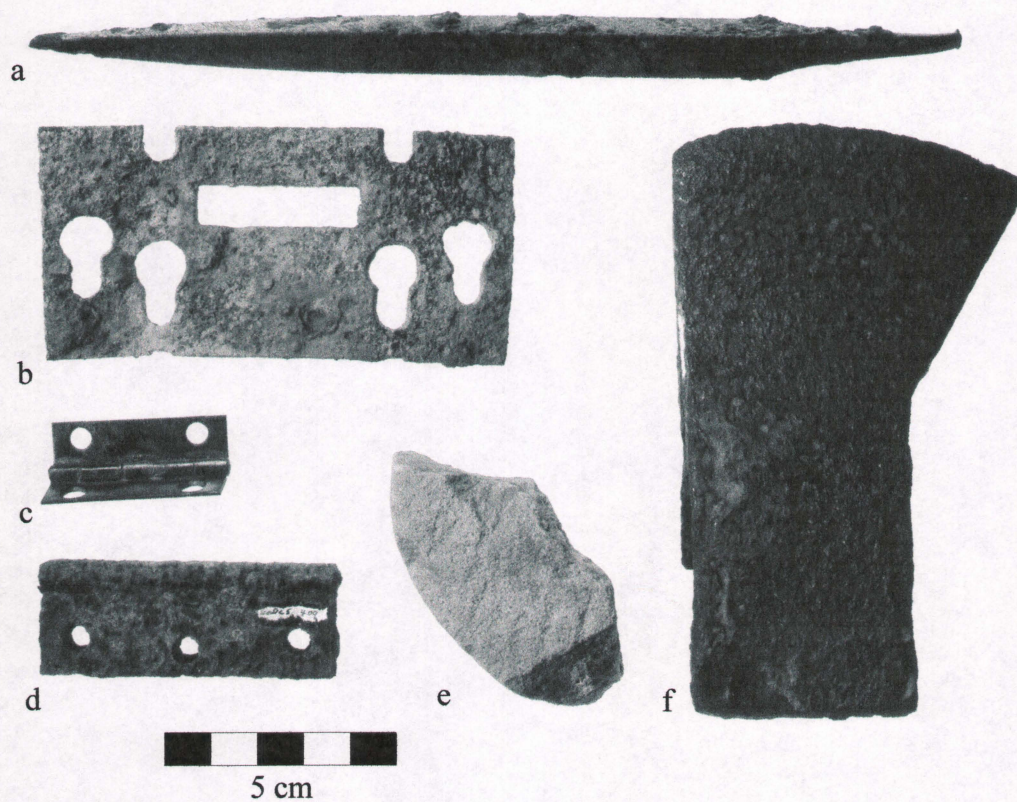


Figure 6.28 Miry Creek site historic hardware and tools. File: a; unidentified: b; butt hinges: c, d; grinding stone fragment: e; axe head: f.



Figure 6.29 Miry Creek site copper container.

6.6.12 Miscellaneous Metal Fragments (n=102)

Fifty-three pieces of lead foil were collected. The remaining metal fragments are small and nondescript. Nine ferrous metal, 35 non-ferrous metal, and six lead fragments are present in the collection.

6.6.13 Historic Ceramic Sherds (n=644)

Many modern ceramics have been collected from the Miry Creek site and these are part of the site's historic homestead component. With the exception of three dishes, the ceramics do not bear maker's marks.

One nearly completely reconstructed glazed, cream coloured, ironstone china saucer is represented by 62 sherds. The plate has a 15 cm diameter and was manufactured by J & G Meakin.

One earthenware plate is represented by 35 sherds. It bears a green flowered pattern of under glaze transfer print. The partial maker's mark includes the words "Furnival" and "England".

One hundred sherds of an earthenware plate have a green flowered under glaze transfer print. The mark on the bottom indicates that the manufacturer was Bridgwood and Son.

Sixty-three stoneware sherds represent a cream coloured, glazed stoneware bowl. This bowl does not have a maker's mark and neither its manufacturer nor date of manufacture can be determined.

Of the small unidentifiable sherds five small earthenware sherds are decorated with over glaze transfer print. Fifty-five have under glaze transfer print in various

patterns. Thirteen of the earthenware sherds have flow blue patterns, and 263 cream coloured, glazed earthenware sherds have no pattern.

Several porcelain sherds have also been collected. There are twenty-nine porcelain sherds with no pattern and nineteen with under glaze transfer print.

6.6.14 Fasteners (n=39)

The fasteners are machine cut and consistent with the early homestead and ranching period. A listing of the fasteners collected from the Miry Creek site is presented in Table 6.6.

Table 6.6 Fasteners from the Miry Creek site

Fasteners	
machine cut nails	
1 1/2" square/rectangular head	3
2" square/rectangular head	1
2 1/2" square/rectangular head	5
3" square/rectangular head	1
square/rectangular head fragments	3
circular/flat head fragment	1
horseshoe nails	3
machine cut nail tip/shank fragments	5
wire nail shank/tip fragments	1
spike	
3" spike	1
tacks	
brass domed tacks	12
square/rectangular head tacks	1
tack shank/tip fragment	1
screws	
countersunk slotted screw fragment	1
Total	39

6.7 AMS Dates

An encrustation of carbonized food residue coats the interior of many of the Miry Creek site vessels. This residue was removed from two vessels and submitted to Beta Analytic for AMS analysis. The two vessels selected for dating were chosen for several reasons. One determining factor was the thickness of the coating. A heavy encrustation of residue permitted the removal of an adequate sample. These vessels were also chosen because a large portion of the vessel is present and they are of very different styles. It is important to obtain dates on vessels of different styles to determine if temporal differences are the reason for the stylistic variation.

Vessel 75 is a globular vessel with a vertical rim profile. The exterior surface bears vertical cord roughening, and decoration is limited to the flat lip surface which bears CWT impressions. AMS analysis of the carbon residue yielded a date of 220 ± 40 rcybp (Beta-166750).

Vessel 97 is an elaborately decorated, thin, compact vessel with a wedge rim profile and simple stamped exterior surface. Dentate impressions decorate the lip surface, and the rim bears dentate and fingernail impressions. AMS dating yielded a date of 170 ± 40 rcybp (Beta-172176).

One date on charcoal from activity area # 34 was obtained by ARMS in 1984. This sample yielded a date of 335 ± 70 rcybp (S-2568).

Table 6.7 presents the calibrated ages of the Miry Creek site samples. These dates were calibrated using the computer program Calib 4.3 (Stuiver et al. 1998). Although the three radiocarbon dates obtained from this site show variation, they overlap at two sigma and can be averaged (Table 6.8). The average results from the two

vessels provide three possible ages. The AD 1920 to 1950 date can be ruled out because it is too recent. The remaining dates of AD 1650 to 1680 and AD 1730 to 1810 are both possibilities. However, AD 1650 to 1680 predates the Protohistoric period in southwestern Saskatchewan; therefore, the AD 1730 to 1810 date is most likely. When the dates from the two vessels are analysed individually, the date from vessel 97 indicates that the vessel may have been used as late as A.D. 1890.

Table 6.7 Calibrated age of Miry Creek site samples

Lab Number	Conventional Radiocarbon Age (rcybp)	Calibrated Age
Beta-172176	170 ± 40	Cal AD 1650 to 1890 AND Cal AD 1910 to 1950
Beta-166750	220 ± 40	Cal AD 1640 to 1680 AND Cal AD 1730 to 1810 AND Cal AD 1930 to 1950
S-2568	335 ± 70	Cal AD 1430 to 1670 AND Cal AD 1780 to 1800

Table 6.8 Averages of Miry Creek site radiocarbon dates

Average of Beta-172176 and Beta-166750	
Conventional Radiocarbon Age (rcybp)	Calibrated Age
195 ± 29	Cal AD 1650 to 1680 AND Cal AD 1730 to 1810 AND Cal AD 1920 to 1950

Average of Beta-172176 and Beta-166750 and S-3568	
Conventional Radiocarbon Age (rcybp)	Calibrated Age
215 ± 27	Cal AD 1640 to 1680 AND Cal AD 1740 to 1750 AND Cal AD 1760 to 1800 AND Cal AD 1936 to 1947

6.8 Interpretation of Miry Creek Site Artifact Analysis

The Miry Creek site is a large habitation site. The 1983 ARMS investigations identified 41 activity areas, many of which contained hearths, butchered and burned bone, and lithic scatters. These types of activity areas and the artifacts present in the Heron collection, including the pottery, bone tools and lithic tools, are typical of those recovered from habitation sites.

The Middle Precontact period is sparsely represented by five projectile points including one Early Middle period point, two Oxbow points, one Duncan, and one Hanna point. Late Precontact period projectile points include three Besant, 14 Avonlea, 27 Prairie Side-notched, and 151 Plains Side-notched projectile points. Late Precontact period ceramics representing 134 vessels were also recovered from the site.

Artifacts characteristic of Old Women's and Mortlach assemblages have been identified. Thirty vessels display attributes characteristic of Old Women's ceramic assemblages. Old Women's assemblages also commonly contain Prairie and Plains Side-notched projectile points. One hundred and four of the Miry Creek site vessels have been classified as Mortlach vessels, and Plains Side-notched points are also present in Mortlach assemblages. Fused shale and Knife River Flint artifacts are common in many southern Saskatchewan Mortlach assemblages (Walde 1994:105). However, at the Miry Creek site only 5.3% (n=8) of the Plains Side-notched points are manufactured from Knife River Flint, and 22.2% (n=34) are manufactured from fused shale.

Mortlach ceramic assemblages are often highly variable, and this is the case at the Miry Creek site. The Miry Creek Mortlach vessels are often more elaborately decorated than the Antelope Creek site vessels. Several vessels in the Miry Creek

Mortlach ceramic assemblage possess attributes similar to Cluny site vessels (Forbis 1977), but many of these forms are also seen in other Mortlach assemblages.

The co-occurrence of Mortlach and Old Women's phase artifacts at the Miry Creek site is difficult to interpret. Because of the disturbed nature of the site it is impossible to determine whether these represent separate occupations or the co-occupation of two groups. Mortlach and Old Women's phase cultural materials have been recovered from other southwestern Saskatchewan sites including the Antelope Creek site (Chapter 5) and the Sykes site (Walde 1994). Unfortunately, all of these collections come from disturbed contexts. Future archaeological investigations in the area may reveal more information about the relationship between Mortlach and Old Women's.

The AMS dates on residue from two vessels support the classification of these as representing a Protohistoric occupation. The vessels that were dated appear to have been used during the Protohistoric period. It is impossible to determine whether all the ceramics represent one large occupation or several occupations over a period of time. Additional absolute dates may clarify this.

Several artifacts provide evidence that the site was occupied during the Protohistoric period. Trade beads, tinkling cones, and metal projectile points are typical trade goods recovered from Protohistoric sites that are part of the Miry Creek site collection. Several Miry Creek site artifacts demonstrate the utilization of European and Aboriginal tools. Three of the fleshers were manufactured using a metal saw, and two pieces of worked glass were also collected. It appears the site's occupants were using European introduced materials to manufacture traditional tools. This indicates that the

introduction of European goods did not lead to the immediate abandonment of traditional technologies.

The buffalo robe trade of southwestern Saskatchewan took place during the 1860s and 1870s. A number of artifacts from the Miry Creek site collection may relate to this time period. The Waterbury Button Company button and Colt 45 revolver were manufactured during this time period and may relate to such an occupation. Detailed analysis of the site's historic artifacts would reveal more about the sites fur trade to early ranching period occupations.

Many of the historic materials from the site are associated with the homestead era, post AD 1900. This area was used as ranchland, and a homestead was located at the mouth of Miry Creek. The historic ceramics, fasteners, hardware, and tools are probably connected with the homestead. Much modern ammunition is scattered on the site surface indicating that this has been a popular area for hunting.

6.9 Summary

The Miry Creek site is a large habitation site located in a sheltered area at the mouth of a large creek. It would have been a desirable living area with available resources including wood and food. In 1800 Peter Fidler noted an abundance of game animals near the Miry Creek site including bison, bear and elk (Johnson 1967). This availability of resources may be the reason this site was selected.

Most of the artifacts are representative of a Mortlach phase occupation that lasted at least until the Protohistoric period. Old Women's phase cultural materials were also collected from the site, but because of the disturbed nature of the site it is impossible to

determine if these groups occupied the site at the same time. The co-occurrence of Mortlach and Old Women's artifacts at sites in southwestern Saskatchewan suggests a relationship between Old Women's and Mortlach peoples. It may be possible to obtain dates from some of the Old Women's vessel and make some conclusions about whether or not the Old Women's and Mortlach occupations are the same age.

The AMS dates of carbonized food residue from two vessel interiors supports the classification of these Mortlach vessels as belonging with the Protohistoric component at the site and adds to the limited number of Mortlach absolute dates. This site was homesteaded in the early 1900s and numerous historic artifacts collected from the site are associated with that occupation.

Chapter 7

Conclusions

The primary aim of this thesis has been to describe and illustrate a large collection of precontact pottery from southwestern Saskatchewan. Attributes including paste texture, vessel form and decorative elements were considered when assigning the vessels to the existing ceramic typologies established for the Northern Plains. Besant, Avonlea, Old Women's, and Mortlach vessels have been identified in the Heron collection, with the vast majority of vessels characteristic of Old Women's and Mortlach assemblages. The presence of other diagnostic artifacts, particularly projectile points, supports the pottery classifications.

The recovery of a Besant vessel from the Antelope Creek site adds to the limited number of Besant ceramics described from southern Saskatchewan. Avonlea parallel grooved ceramics have been recovered from southeastern Alberta, southern Saskatchewan, Montana, and South Dakota (Johnson 1988:139). The Antelope Creek site is within the expected range of Avonlea parallel grooved ceramics.

The presence of significant numbers of Mortlach materials from the Antelope Creek and Miry Creek sites confirms the distribution of the Mortlach phase in this area of southwestern Saskatchewan. Large Mortlach sites have previously been recorded in south-central and southeastern Saskatchewan, Montana, and North Dakota. The Miry Creek and Antelope Creek site collections contain the largest recorded assemblages of

Mortlach cultural materials in southwestern Saskatchewan. There are many large Mortlach phase sites in southern Saskatchewan including the Mortlach, Walter Felt, Long Creek, Stoney Beach, Lake Midden, Sanderson, and Long Creek sites that are located in valleys. River and stream valleys are desirable habitation areas that provide shelter and access to resources including fresh water, wood, plants, and game animals.

It has been suggested that the distribution of the Late Old Women's and Mortlach phases in western Saskatchewan overlaps at the end of the Late Precontact period (Meyer 1988). Old Women's and Mortlach materials have been collected from the Antelope Creek and Miry Creek sites and other southwestern Saskatchewan sites including the Sykes site in the Swift Current Creek Valley (Walde 1994:303).

Unfortunately all of these vessels were recovered from surface collections, and when dealing with mixed assemblages it is difficult to determine whether or not these represent concurrent occupations. Future excavations at less disturbed sites in southwestern Saskatchewan and southeastern Alberta may provide insight into the co-occurrence of Old Women's and Mortlach materials. AMS dating of additional vessels may indicate whether or not the Old Women's and Mortlach assemblages from these areas are the same age.

The presence of syncretic vessels may be the result of interaction between two groups. Several of the vessels in the Miry Creek and Antelope Creek assemblages display a combination of Old Women's and Mortlach ceramic traits. The presence of dentate impressions (a typical Mortlach decorative element) on vessels that otherwise resemble Old Women's ceramics may be the result of interaction between two groups. The merging of ceramic styles has been cited as evidence of interaction between cultural groups in other areas of Saskatchewan (Walde et al.1995; Meyer and Epp 1990).

The Antelope Creek and Miry Creek sites may represent aggregation centers. Trade, social, and ritual activities could be conducted at aggregation sites such as Meyer and Thistle's (1995) "rendezvous sites" and trade centers as discussed by Wondrasek (1997). Trade was an important aspect of intertribal relations on the Northern Plains and involved a trading network with trading centers (Wood 1980). Systematic intertribal exchanges normally took place at annual trade fairs, festivals or rendezvous (Wood 1980:98). Wondrasek (1997) proposes that the Muskoday/Birch Hills region of the Central Saskatchewan Parklands may have been the location of a trade fair, and this is presented as a possible explanation for the mixing of plains and forest traits exhibited by Lozinsky subphase ceramics. The diversity of the ceramic assemblages at the Antelope Creek and Miry Creek sites may also be the result of interaction between different cultural groups, perhaps at a gathering such as a trade fair.

The Antelope Creek and Miry Creek sites possess the environmental requirements for a trade fair or large aggregation as discussed by Wondrasek (1997:52-53) including suitable space, water, an abundant and predictable food resource, adequate timber, and an area that is easily accessible by trails and/or waterways. Wondrasek (1997:57) notes that the size of aggregation sites will be greater than most other sites in a region. The Antelope Creek and Miry Creek sites cover large areas, and the Heron collection contains two of the largest assemblages of Late Precontact period artifacts from this area of southwestern Saskatchewan.

The artifact assemblages at the Antelope Creek and Miry Creek sites are consistent with those of aggregation sites. Large aggregation sites should exhibit many different kinds of features and classes of artifacts (Meyer and Thistle 1995:410). A variety of artifacts are present in the Miry Creek and Antelope Creek site assemblages.

Forty-one activity areas were observed during the 1983 ARMS investigations at the Miry Creek site including hearths, lithic and bone scatters. Aggregation sites such as the Rendezvous may also exhibit evidence of the religious ceremonies that dominate these gatherings (Meyer and Thistle 1995:410). At both the Miry Creek and Antelope Creek sites there is evidence of ritual or ceremonial activity. The Miry Creek site collection includes numerous iniskim, smoking pipe fragments, and bird bone whistles. The Antelope Creek site collection contains numerous smoking pipes, an incised red pipestone tablet, and bird bone whistles. These artifacts may reflect ceremonial activities that were conducted at the site.

The detailed description and illustration of each vessel in the Heron collection will allow for future comparisons of ceramics from these and other sites. There are several useful summaries of Mortlach pottery assemblages that discuss the relative frequency of traits and tendencies of particular attributes to co-occur (e.g. Walde 1994; Malainey 1991). However, few individual vessels are described and illustrated, and because these are summaries it is difficult to compare vessels from sites.

This research has demonstrated the importance of working with collectors like Fulton and Ruth Heron who are knowledgeable about the sites in their area. They have informed archaeologists about the location of many important sites. Well-organized collections that contain diagnostic artifacts provide valuable information about specific sites and the regional prehistory of an area. The artifacts were collected from extremely disturbed areas, but it is still possible to construct a culture history based on diagnostic specimens and to make some statements about the function of the sites. It is also possible to obtain absolute dates on artifacts from collections that have been in storage for many years. There are, however, limitations to working with collections. The lack

of provenience data makes it impossible to determine which diagnostic artifacts are related to non-diagnostic artifacts, and it is not possible to reconstruct activity areas at the sites. This is, however, a problem encountered at many severely disturbed sites, not just when analyzing the collections of avocational archaeologists.

When dealing with mixed ceramic assemblages it is often difficult to assign each vessel to a particular archaeological phase. Several attributes are present in more than one ceramic assemblage, and many vessels are represented by very small sherds. Each of the vessels from the Antelope Creek and Miry Creek sites was assigned to a particular phase based on the characteristic attributes they display, but the classification of vessels is often based on subjective criteria such as vessel quality and paste texture.

This thesis has described and analyzed a large and significant collection of Late Precontact to Protohistoric period artifacts from an area of southwestern Saskatchewan that is rich in archaeological resources. The South Saskatchewan River Valley has been severely impacted by the creation of Lake Diefenbaker, and many archaeological sites have been destroyed. By analyzing collections like the one belonging to Ruth and Fulton Heron, it is possible to retain valuable information about the archaeology of this area.

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Appendix A

Artifacts Observed During the 1983

Saskatchewan Archaeological Resource Management Section Investigations

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
1	N-S: 11 E-W: 16		small number of fused shale, white chert and yellow chert retouch flakes, 1 FCR fragment	mostly smashed long bones, a few rib fragments a few small burned fragments, teeth, many small unidentifiable fragments	
2	N-S: 18 E-W: 16		FCR, 1 petrified wood flake	2 small mammal ulnae (Canid?), long bone, scapula, skull, teeth, rib fragments, 1 distal femur, 1 deer? metapodial, 1 phalange, 1 carpal or tarsal, 1 small mammal femur (rodent) or mustelid)	1 hearth with 6 rocks visible
3	N-S: 17 E-W: 15		FCR, 1 quartz flake, 1 16cm ² split chert cobble	1 proximal humerus (possibly beaver), rib and long bone fragments, 1 proximal scapula, tooth fragments 2 tarsals or carpals	1 or possibly 2 hearths, i.e. FCR strewn over 10m ²
4	N-S: 15 E-W: 19		FCR	rib, long bone fragments, teeth and tooth fragments, 2 vertebra fragments, butchered long bones with articulations, 1 horn core, 1 very small mammal mandible, 1 large bird femur (unbutchered))	2 or probably 3 hearths
5	N-S: 10 E-W: 20		FCR, 1 quartzite uniface	butchered long bones with articulated ends, teeth and tooth fragments, long bone fragments	1 hearth
6	N-S: 11 E-W: 8	approximately 12 body sherds <1cm	3 quartz flakes	long bone, teeth, scapula and unidentifiable (many burned) fragments, 1 distal metapodial, 1 large bird femur (intrusive?), 1 deer? proximal humerus, 1 small rodent mandible	
7	N-S: 10 E-W: 8		FCR	several teeth and tooth fragments, long bone, scapula, rib, skull fragments, frontal and nasal portion of a skull, 1 vertebra fragment, butchered long bones with articulations	bone tool, 2 distinct hearths

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
8	N-S: 11 E-W: 5		petrified wood flake, chert flakes, FCR	small unidentifiable fragments - some burned, long bone, tooth fragments, pelvis fragment, small rodent mandible, 2 small mammal long bones, 1 long bone with articulation, large bird femur (intrusive).	
9	N-S: 8 E-W: 2		1 quartzite wedge?	long bones, skull fragments, deer? mandible, rib fragments	
10	N-S: 4 E-W: 11	1 rim sherd with CWT lip decoration, 1 body sherd	1 red and grey fused shale projectile point with broken base	small bone fragments - some burned, pelvis, rib, mandible, long bone fragments, 1 proximal humerus, large fish bones	
11	N-S: 15 E-W: 15	1 body sherd	chert flake, 3 quartzite flakes, grey porcellanite flake, 1 split basalt cobble tool	long bone, rib, mandible, teeth and tooth fragments, butchered long bone with articulation, foot bones	2 concentrations of materials with heaviest concentration to the northeast
12	N-S: 17 E-W: 10		FCR	long bone, rib, mandible, tooth, and unidentifiable fragments, long bones with articulated ends (butchered), foot bones	
13	N-S: 12 E-W: 5	9 check stamped body sherds		skull, long bone, teeth, mandible, rib and small unidentifiable fragments, small mammal (rodent?) bones, foot bone, small number burned fragments	
14	N-S: 15 E-W: 14	2 body sherds (1 plain and 1 twisted cord)	FCR, worked petrified wood, 1 white chert flake	rib, long bone, mandible, scapula, pelvis, and small unidentifiable fragments, butchered long bone with articulations	
15	N-S: 10 E-W: 3		FCR	1 bird long bone	FCR spread across entire length of area

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
16	N-S: 5 E-W: 7		FCR, pinkish white medium grained chert flakes	pelvis, rib, long bone, scapula, and small unidentifiable fragments, foot bone.	flakes occur in a tight cluster on east edge of the area - mostly retouch, but some larger
17	N-S: 4 E-W: 7		small number of fused shale, white chert and yellow chert retouch flakes, 1 FCR fragment	1 butchered long bone with articulation, a few small unidentifiable fragments	very light scatter
18	N-S: 6 E-W: 9		6 FCR fragments 1 red and grey fused shale fragment	small unidentifiable fragments, teeth, 1 foot bone, rib fragments	
19	N-S: 9 E-W: 7	1 shoulder sherd, 4 neck sherds, 2 body sherds cwt impressions and vertical incisions	FCR	1 vertebra fragment, 2 ribs, 1 long bone fragment, partial mandible, small mammal (rabbit?) humerus, deer? long bone	low frequency of bone, 2 moderate to heavy concentrations of FCR
20	N-S: 9 E-W: 13		1 grey and 1 buff chert flake, 1 grey fused shale flake	rib, long bone and small unidentifiable fragments, distal metapodial and distal deer? tibia, 1 small mammal (muskrat?) humerus	
21	N-S: 7 E-W: 10	1 small body sherd	FCR	1 scapula fragment, 3 small unidentifiable fragments	2 heavy concentrations of FCR approximately 6 m apart
22	N-S: 6 E-W: 8		worked chert flake, primary decortication flake of coarse crystalline quartz, 4 fragments FCR	long bone fragments, foot bone, mandible and scapula fragment, small unidentifiable fragments, butchered long bone with articulation, fish bones, foot bone fragments	

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
23	N-S: 13 E-W: 11		1 grey fused shale projectile point base, 1 chert flake, 3 Fragments of FCR	small unidentifiable fragments - some burned, 4 vertebrae, scapula fragment, teeth and tooth fragments, 1 smaller (deer?) scapula fragment, rib and long bone fragments, 1 distal metapodial	relatively light amount of material
24	N-S: 9 E-W: 4		3 FCR	small unidentifiable fragments, 2 scapula fragments, long bone fragments, 3 butchered long bone fragments with articulations, 2 bird long bones	very light scatter
25	N-S: 8 E-W: 9	several small body sherds	FCR, large tan quartzite spall, pink and white chert flake	small, unidentifiable fragments - some burned, rib and teeth fragments, small rodent mandible, small mammal long bone	
26	N-S: 18 E-W: 18		FCR, white chert retouch flakes, tan quartzite flake	1 scapula fragment, 1 foot bone, unidentifiable fragments - some burned, tooth fragments, clamshell	light scatter over a wide area
27	N-S: 10 E-W: 7		FCR	rib fragments, scapula fragment, tooth fragments, small unidentifiable fragments	very light scatter, 1 scatter of FCR
28	N-S: 28 E-W: 18		FCR, chert flakes, petrified wood flake	butchered long bones with articulations, small unidentifiable fragments - some burned, long bone and rib fragments, vertebra fragments, cranial fragments, tooth fragments, bird long bones (1 broken), small mammal (canid?) foot bone, bison foot bones, small mammal (rodent) humerus	1 or possibly 2 hearths
29	N-S: 18 E-W: 19		FCR, worked petrified wood flake, chert flakes	butchered long bones with articulations, small unidentifiable fragments - some burned, long bone, rib, and mandible fragments, foot bones, vertebrae, teeth, scapula fragments, bird long bones, small mammal (badger?) humerus	

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
30	N-S: 12 E-W: 15		FCR, numerous petrified wood flakes, variety of chert flakes, late side notched point made of micro crystalline, opaque light grey chert	long bone, rib, scapula fragments, small, unidentifiable fragments - some burned, butchered long bones with articulations	clustering and size of flakes suggests a workshop, 1 and probably 2 hearths
31	N-S: 19 E-W: 18		FCR, 3 chert flakes, polished schist plate	tooth fragments, mandible fragments, rib and long bone fragments, small unidentifiable fragments (some burned), foot bone, scapula fragments, 2 deer? radii, bird long bones, butchered long bones with articulations, small mammal (canid?) foot bone	relatively high frequency of teeth, 1 or possibly 2 hearths
32	N-S: 12 E-W: 6		chert retouch flakes	foot bone, metapodial, small unidentifiable fragments (some burned), 1 deer? clavicle	
33	N-S: 17 E-W: 9	several small body sherds	petrified wood flake	skull, rib, long bone fragments, teeth and tooth fragments, small unidentifiable fragments - some burned, foot bones, horn core, bird long bones, deer? radius, small mammal radius and ulna, small mammal rib, butchered bones with articulations, small carnivore mandible, vertebra, small mammal humerus (beaver? or badger?)	
34	N-S: 5 E-W: 10	small body sherds	3 FCR fragments	small unidentifiable fragments - some burned, teeth and tooth fragments, rib fragments	dark, irregular shaped stain visible on the hard pan, approximately 1 x 0.5 m
35	N-S: 11 E-W: 8		petrified wood flakes	long bone, rib, small unidentifiable fragments, bird humerus, foot bone	4 larger flakes in a group 2 m west

Activity Area	Dimensions (m)	Ceramics	Lithics	Faunal	other
36	N-S: 12 E-W: 19		FCR, split quartzite cobble tool, quartz cobble, chert flake	long bone, rib, skull fragments, small unidentifiable fragments (some burned), foot bones, butchered long bones with articulations, 1 vertebra	2 hearths, 1 large calibre lead bullet
37	N-S: 14 E-W: 20	several body sherds	FCR, elliptical quartzite cobble with smoothed ends, late side notched projectile point, made of chert, various chert flakes	small unidentifiable fragments (some burned), foot bones, rib fragments, large canid? metatarsal or carpal	2 cylindrical blue glass trade beads, several chert flakes concentrated in south part of area
38	N-S: 17 E-W: 45	body sherds	FCR, chert flakes	rib, long bone, scapula, vertebra fragments, teeth and tooth fragments, foot bones, butchered long bones with articulations, small unidentifiable fragments (some burned), deer? long bones	very heavy concentration of FCR in NW portion of the area
39	N-S: 16 E-W: 15		3 fragments of FCR, chert end scraper, worked chert flake	rib, long bone fragments, small unidentifiable fragments, teeth and tooth fragments, butchered long bones with articulations	
40	N-S: 25 E-W: 25		FCR, worked chert flake, quartzite primary flake, chert flake	rib, long bone, mandible, scapula fragments, teeth and tooth fragments, small unidentifiable fragments (some burned), butchered long bones with articulations, foot bones	
41	N-S: 3 E-W: 3		FCR, 1 chert flake	teeth fragments, small unidentifiable fragments (some fragments)	area consists of a circular outline of rocks, most of which are fire cracked

Appendix B
Antelope Creek Site Vessel Descriptions

Vessel 1

Three conjoinable rim sherds represent this vessel.

The compact paste contains a medium amount of sand and grit temper particles ranging in size from barely visible to 3.5 mm. The exterior surface of the vessel exhibits closely spaced vertically oriented cord roughening that extends onto the lip surface. The interior is smooth with horizontal striations.

This sherd has a vertical rim profile and may represent a conoidal vessel. The lip shape is square with a slight exterior overhang. The lip surface is flat and 9.1 mm thick. The rim is 8.6 mm thick 25 mm below the lip. The body is 8.2 mm thick 58 mm below the lip.

The rim is decorated with a boss situated 18.5 mm below the lip. The boss was created by pressing a cylindrical object into the interior wall. The interior punctate is 7.9 mm deep with a 3.2 mm diameter. On the left side of the boss is an impression that appears to have been made when it was pinched between the fingers.

Vessel 2

One large, undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles measuring between 1.3 and 4.0 mm across. The exterior of the vessel bears horizontally oriented parallel grooves that have been smoothed and obliterated in some areas. The ridges are 2.5 mm wide and spaced 4.5 to 5.0 mm apart. The interior of the vessel is smooth.

This sherd has a vertical rim profile and may represent a conoidal vessel. The 6.9 mm thick lip is square with a flat surface. The rim is 7.5 mm thick at 25 mm below the outer lip edge and is 8.2 mm thick 50 mm below the lip edge.

Vessel 3

One undecorated rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper particles measuring less than 2.1 mm across. The exterior of the vessel exhibits parallel grooves that have been heavily smoothed. They are oriented in a slightly left oblique direction. The ridges are 3.5 mm wide and spaced 3.9 mm apart. The interior is smooth.

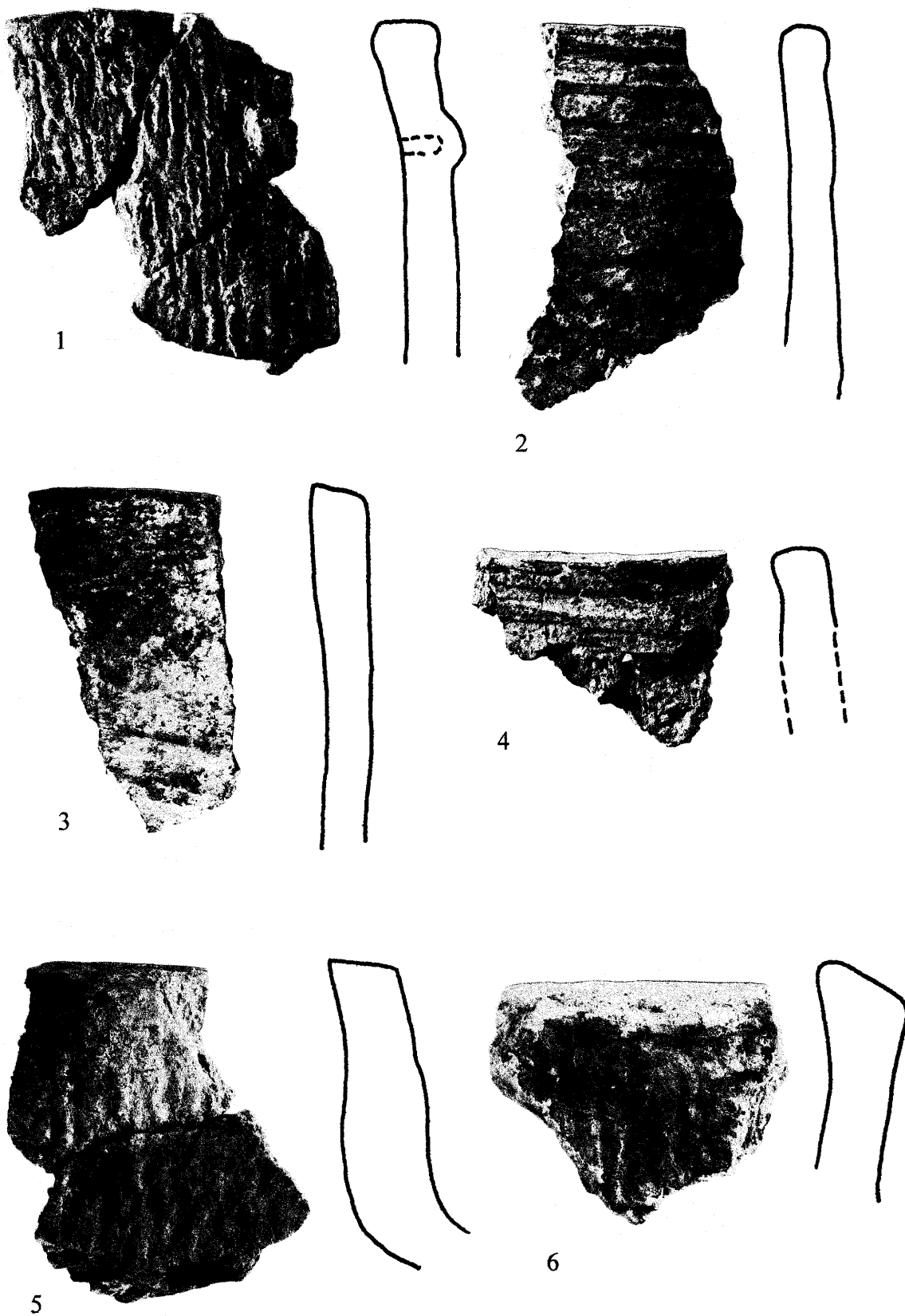
This vessel has a vertical rim profile and a square, 8.7 to 9.2 mm thick lip. The rim is 7.6 mm thick 25 mm below the lip edge. It probably represents a conoidal vessel.

Vessel 4

Two undecorated rim sherds represent this vessel.

The extremely laminated and exfoliated paste contains a medium amount of grit temper particles measuring between 0.9 and 3.8 mm across. The exterior surface bears horizontally oriented parallel grooves. The series of ridges and grooves are clearly visible. The ridges are 2.4 mm wide and 3.0 mm apart. The interior is smooth with exfoliated areas.

The sherd has an unassignable rim profile and a square, flat, 10.2 mm thick lip. It is similar to vessels 2 and 3 and may also represent a conoidal vessel.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 5

Two undecorated, conjoinable sherds representing an area extending from the lip to the neck have been assigned to this vessel.

The extremely laminated paste contains a sparse amount of grit temper particles ranging in size from 1.2 to 4.6 mm. The exterior of the vessel bears lightly smoothed, vertically oriented cord roughening. A thin encrustation of carbonized residue coats the smooth interior.

This vessel has a vertical rim profile, and the flat lip is 11.9 mm thick. The rim is 13.9 mm thick. The thickest portion of this sherd is the 15.9 mm thick neck.

Vessel 6

One undecorated rim sherd represents this vessel.

The laminated paste contains a sparse amount of grit temper particles measuring 1.4 to 2.0 mm across. The exterior surface bears vertically oriented cord roughening that has been lightly smoothed. The sherd is split up the middle. The interior is smooth.

This vessel has an unassignable rim profile, and the lip has an exterior bevel. The lip surface is flat and smooth. Lip thickness ranges between 15.6 to 17.4 mm, and the rim thins to 11.7 mm.

Vessel 7

One undecorated rim sherd represents this vessel.

The compact to slightly laminated paste contains a medium amount of grit temper particles measuring 0.9 to 3.9 mm across. The exterior surface bears vertically oriented cord roughening that extends onto the lip surface. The interior is smooth.

The rim profile is unassignable. The lip shape is expanding with a flat lip surface. The lip is 15.3 mm thick, and the rim thins to 10.3 mm.

Vessel 8

Three small undecorated sherds have been refitted to form a portion of the rim.

The paste is extremely laminated, and the exterior and interior of the vessel have split apart. The paste contains a medium amount of grit temper particles ranging in size from 1.2 to 4.8 mm. The exterior surface treatment is indeterminate. The interior is smooth with a light coating of carbonized residue.

The rim profile is unassignable. The 19.6 mm thick lip has an exterior bevel and flat surface. The rim thins to 11.0 mm.

Vessel 9

One undecorated rim sherd represents this vessel.

The somewhat blocky paste contains a medium amount of grit temper particles ranging in size from 1.2 to 7.2 mm. The majority of the particles are large. The exterior of the vessel bears vertically oriented cord roughening that has been lightly smoothed. The interior is smooth with numerous striations. An encrustation of carbonized residue coats the exterior surface.

The vessel has a vertical rim profile with a rounded, smoothed lip surface. The lip is 15.1 mm thick, and the rim is 10.1 to 12.3 mm thick 25 mm below the lip edge.



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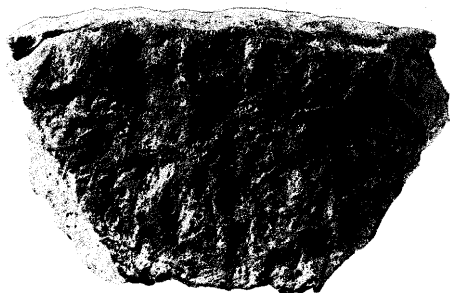
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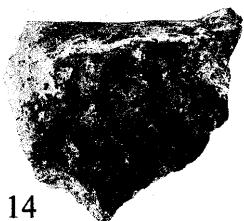
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Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 10

This vessel is represented by one large, undecorated rim sherd.

The paste is laminated and blocky with a medium amount of grit temper particles ranging in size from 1.8 to 2.3 mm. The exterior surface has been smoothed to the point that the underlying surface treatment cannot be determined. A thin encrustation of carbonized residue coats the smooth interior.

This vessel has a vertical rim profile. The 11.5 mm thick lip surface is rounded with an exterior bevel. The rim is 11.9 mm thick 25 mm below the lip edge.

Vessel 11

One undecorated rim sherd represents this vessel.

The extremely laminated and friable paste contains a medium amount of grit temper particles ranging in size from 1.4 to 6.1 mm. The exterior surface bears smoothed fabric impression that extends onto the lip surface.

The rim profile is unassignable, and the lip has an exterior bevel. The lip is 14.6 to 15.1 mm thick. Other measurements cannot be made because the interior is exfoliated.

Vessel 12

One undecorated rim sherd represents this vessel.

The blocky and slightly laminated paste contains a sparse quantity of grit temper particles ranging in size from 1.2 to 2.5 mm. The exterior of the vessel bears vertically oriented cord roughening. The interior is smooth.

The rim profile is unassignable. The lip is 15.2 mm thick and has an exterior flange.

Vessel 13

One undecorated rim sherd represents this vessel.

The laminated and exfoliated paste contains a medium amount of sand and grit temper particles measuring up to 1.9 mm across. The exterior surface is indeterminate because most of it is exfoliated, and the interior is smooth.

This vessel has an unassignable rim profile. The 10.2 mm thick, flat lip has a slight exterior bevel.

Vessel 14

One undecorated rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 1.5 to 2.3 mm across. The exterior surface bears lightly smoothed vertically oriented cord roughening. The interior is smooth.

The vessel profile is unassignable. The lip has an exterior bevel with an 11.5 mm thick, flat lip surface. The rim is 9.3 mm thick.

Vessel 15

One undecorated rim sherd represents this vessel.

The compact paste contains a medium quantity of grit temper particles measuring 1.1 to 2.6 mm across. The exterior surface bears fabric impression. The interior is smooth.

The rim profile is unassignable. The lip shape is expanding. The 15.1 to 16.0 mm thick lip has a flat, smooth surface. The rim thins to 11.2 mm.

Vessel 16

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles measuring between 1.0 and 4.6 mm across. The exterior bears vertically oriented cord roughening that has been smoothed. Light carbonized residue coats the smooth interior.

This vessel has a vertical rim profile and the lip has a slight exterior bevel. The smooth, flat lip is 12.4 mm thick, and the rim is 11.0 mm thick.

Vessel 17

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.0 to 3.3 mm. The exterior surface treatment cannot be determined. The interior is smooth. Faint cord roughening is visible on the lip surface.

The rim profile is unassignable. There is a slight concavity on the vessel exterior. The lip shape is square with a 13.8 mm thick, flat lip surface. The rim is 12.2 mm thick.

Vessel 18

One undecorated rim sherd represents this vessel.

The blocky and slightly laminated paste contains a medium amount of grit temper particles ranging in size from 0.7 to 3.2 mm. The exterior surface bears vertically oriented cord roughening. The interior is smooth. Cord roughening extends onto the lip surface.

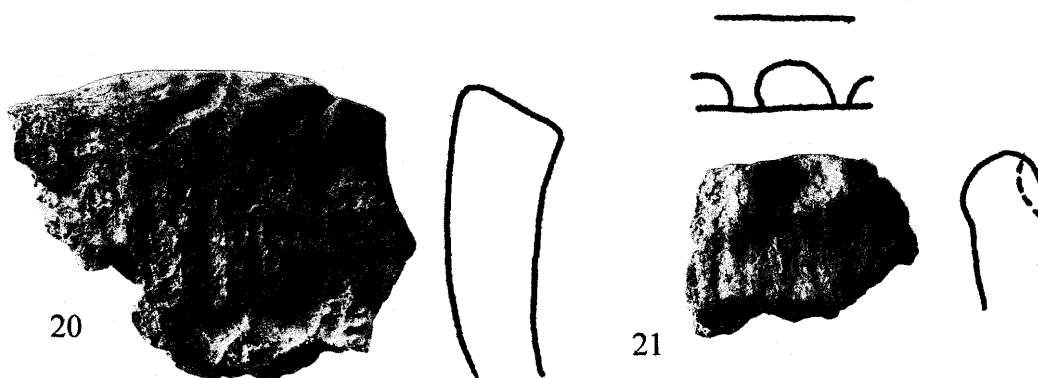
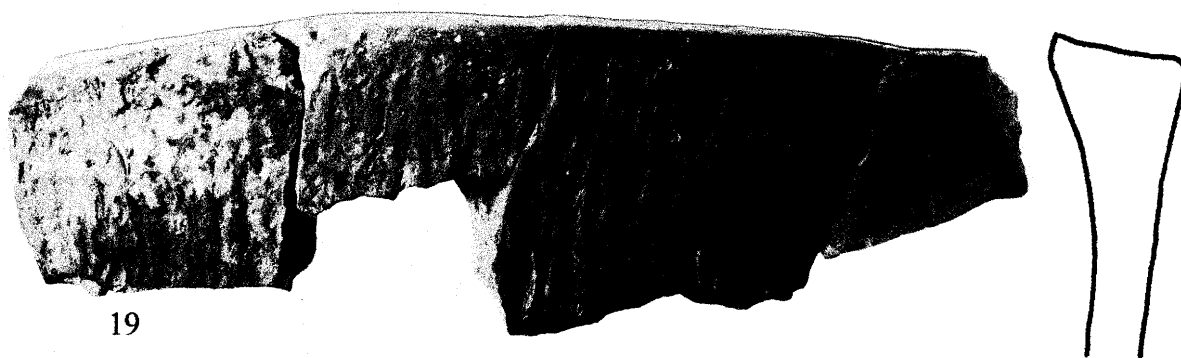
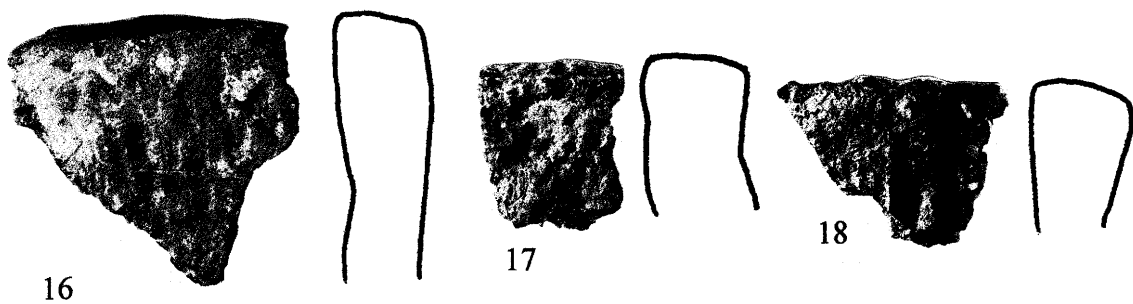
The rim profile is unassignable. The lip shape is square. The lip is 12.5 mm thick and the rim is 9.5 mm thick.

Vessel 19

Four undecorated, conjoinable rim sherds represent this vessel.

The paste is compact with a medium amount of tiny sand particles and grit temper particles measuring up to 4.7 mm across. Lightly smoothed, vertically oriented cord roughening marks the exterior of the vessel. The smooth interior exhibits faint striations.

The rim profile is unassignable. The lip shape is expanding with a smooth, flat, 16.9 to 20.0 mm thick lip. The rim thins to 7.7 mm at 25 mm below the lip edge.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 20

One rim sherd represents this vessel.

The blocky and laminated paste contains a medium amount of grit temper particles ranging in size from 1.2 to 5.3 mm. The exterior of the vessel bears vertically oriented cord roughening with some exfoliated areas. The interior is smooth.

This vessel has a vertical rim profile. The lip has an exterior bevel with a flat 13.7 mm thick surface. The rim is 11.5 mm thick.

Decorative elements are restricted to the outer lip edge which bears right oblique SET impressions that have created 4.5 mm wide gouges across the lip edge. The impressions are 14.3 mm long, and spaced 8.8 mm apart.

Vessel 21

A single rim sherd represents this vessel.

The blocky paste contains a sparse amount of tiny sand and grit temper particles measuring up to 2.8 mm across. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears lightly smoothed vertically oriented cord roughening. The interior is mostly exfoliated and coated with a thin layer of carbonized residue.

The rim profile is unassignable. The 12.4 mm thick lip is rounded.

Finger impressions decorate the outer lip edge. They are 9.9 mm wide and spaced 5.2 mm apart.

Vessel 22

Two large sherds represent an area extending from the lip to the neck.

The blocky and slightly laminated paste contains a medium quantity of grit temper particles ranging in size from 1.2 to 6.3 mm. The exterior surface bears smoothed vertically oriented cord roughening that extends onto the lip. The interior is smooth with some exfoliation.

This vessel has a vertical rim profile. The 13.1 to 14.6 mm thick lip has an exterior bevel and flat surface. Rim thickness ranges from 9.5 to 11.6 mm thick, and the neck is 11.5 mm thick.

The only decorative element on this 90 cm portion of rim is a 4.1 mm wide right oblique round edged tool impression on the outer lip edge.

Vessel 23

Three sherds have been assigned to this vessel. Two have been refitted and represent an area extending from the lip to the neck/shoulder.

The blocky paste contains a medium amount of grit temper particles ranging in size from 1.0 to 4.9 mm. The exterior surface of the vessel bears smoothed vertically oriented cord roughening. The vessel interior exhibits several depressions that were probably formed by an anvil such as a small stone being held against the vessel during its formation. A heavy encrustation of carbonized residue coats the vessel interior.

The vessel has a vertical rim profile. The lip is flat and smooth with a slight exterior bevel. The lip thickness ranges from 14.4 to 15.0 mm. The rim is 14.5 to 15.3 mm thick, and the neck is 14.9 mm thick. The thinnest portion of this vessel is the neck/shoulder which is just 7.5 mm thick.

Decoration is limited to the outer lip edge. Notches were created by impressing a round edged object into the wet clay. These notches are 3.6 mm wide and spaced 4.5 to 10.1 mm apart.

Vessel 24

One large sherd extending from the lip to the neck represents this vessel.

The blocky and slightly laminated paste contains a medium quantity of grit temper particles ranging in size from 1.5 to 7.4 mm. The exterior surface bears lightly smoothed vertically oriented cord roughening that extends onto the lip surface. The interior is smooth with light carbonized residue and horizontally oriented striations.

The vessel has a vertical rim profile. The lip shape is expanding with a flat, 16.7 to 17.3 mm thick lip surface. The rim is 9.9 mm thick and the neck is 9.8 mm thick.

The lip surface bears a remnant of one small punctate 8.4 mm deep and 2.0 mm in diameter. Only one punctate is present on this 72 mm portion of lip.

Vessel 25

Five non-conjoinable rim sherds represent this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 0.9 to 3.4 mm. The underlying exterior surface treatment has been obliterated by smoothing. The interior is smooth with a thin encrustation of carbonized residue.

The vessel has a vertical rim profile. The lip is rounded. Lip thickness ranges from 11.6 to 12.5 mm thick, and the rim is 9.6 mm thick.

Decoration is restricted to the lip surface which is decorated with CWT impressions oriented in a slightly right oblique direction. The impressions are 1.9 mm wide with 5 loops per centimetre and spaced 3.6 to 6.0 mm apart.

Vessel 26

Two conjoinable rim sherds represent this vessel.

The blocky, laminated, exfoliated paste contains a sparse quantity of sand and grit temper particles ranging in size from barely visible to 2.3 mm. The exterior surface exhibits smoothed vertically oriented cord roughening. The interior is exfoliated.

The rim profile is unassignable. The lip has an exterior bevel with an 11.4 mm thick, rounded lip surface. No other measurements can be made because the interior is exfoliated.

Shallow, 2.2 mm wide right oblique CWT impressions spaced about 5 mm apart decorate the lip surface. The cords are closely spaced with nine loops per centimetre.

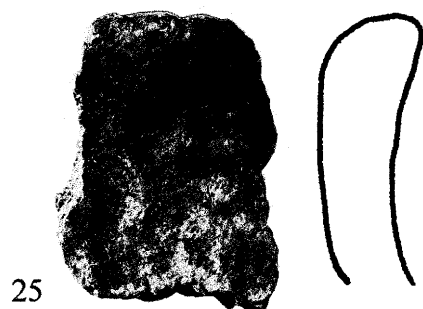
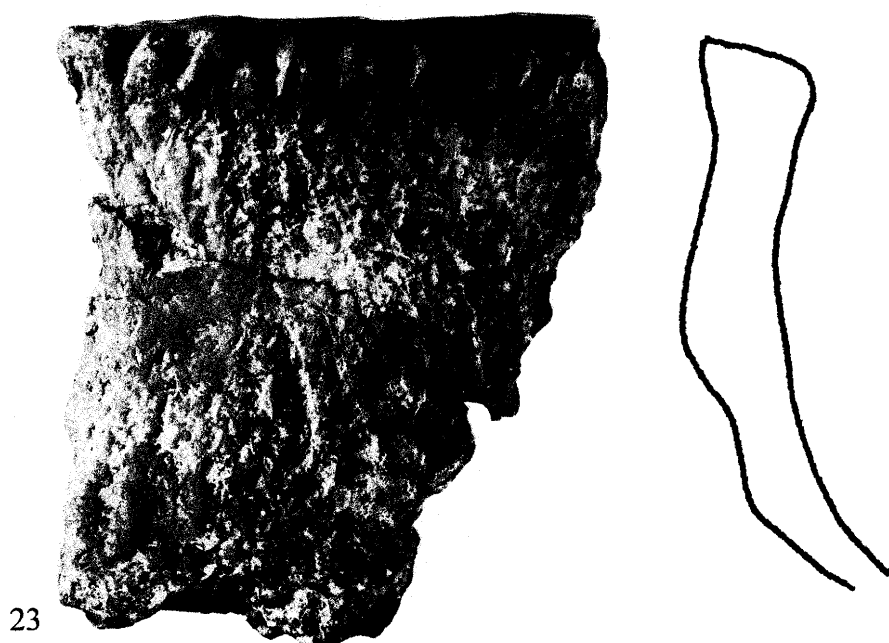
Vessel 27

One rim sherd represents this vessel.

The blocky and laminated paste contains a sparse quantity of grit temper particles ranging in size from 1.2 to 2.1 mm across. The exterior and interior surfaces cannot be differentiated. One surface is exfoliated, and the other is smooth.

The rim and lip profiles are unassignable. The lip surface is flat. No measurements can be made because one of surfaces is exfoliated.

Tiny dentate impressions decorate the lip surface. These right oblique rows are 3.3 mm wide. The dentates are 0.9 mm wide with an average tooth length of 1.9 mm.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 28

Five non-conjoinable rim sherds represent this vessel.

The blocky and poorly consolidated paste contains a heavy quantity of grit temper particles ranging in size from 1.4 to 3.6 mm. The exterior of the vessel bears heavily smoothed vertically oriented cord roughening. The interior is smooth with numerous striations that appear to have been created by wiping the vessel. This wiping has brought several flecks of mica to the surface.

The rim profile is unassignable. The lip shape is expanding with a slight interior flange. The flat surface is 11.8 mm thick. The rim thins to 9.1 mm.

Decoration is restricted to the lip surface. It is decorated with widely spaced vertically oriented CWT impressions. The impressions are 4.1 mm wide with three loops per centimetre.

Vessel 29

One rim sherd represents this vessel.

The blocky paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. The exterior surface treatment is indeterminate because part of the exterior is exfoliated. The uneven interior bears a shallow depression that was created during the formation of the vessel by a thumb or anvil such as a small stone being held against the vessel.

The vessel profile is unassignable. The lip is rounded with a thickness of 10.1 to 11.8 mm. The thickest portion of the rim is 13.0 mm thick, but much of the rim is exfoliated.

The outer lip edged is decorated with right oblique sharp edged tool impressions that are 1.9 mm wide and 11.1 mm long. Below these is a shallow depression that may have been created by smoothing a finger tip across the rim.

Vessel 30

One undecorated rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 0.9 to 2.3 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. The interior is smooth with numerous striations. Vertically oriented cord impressions are visible on the lip surface.

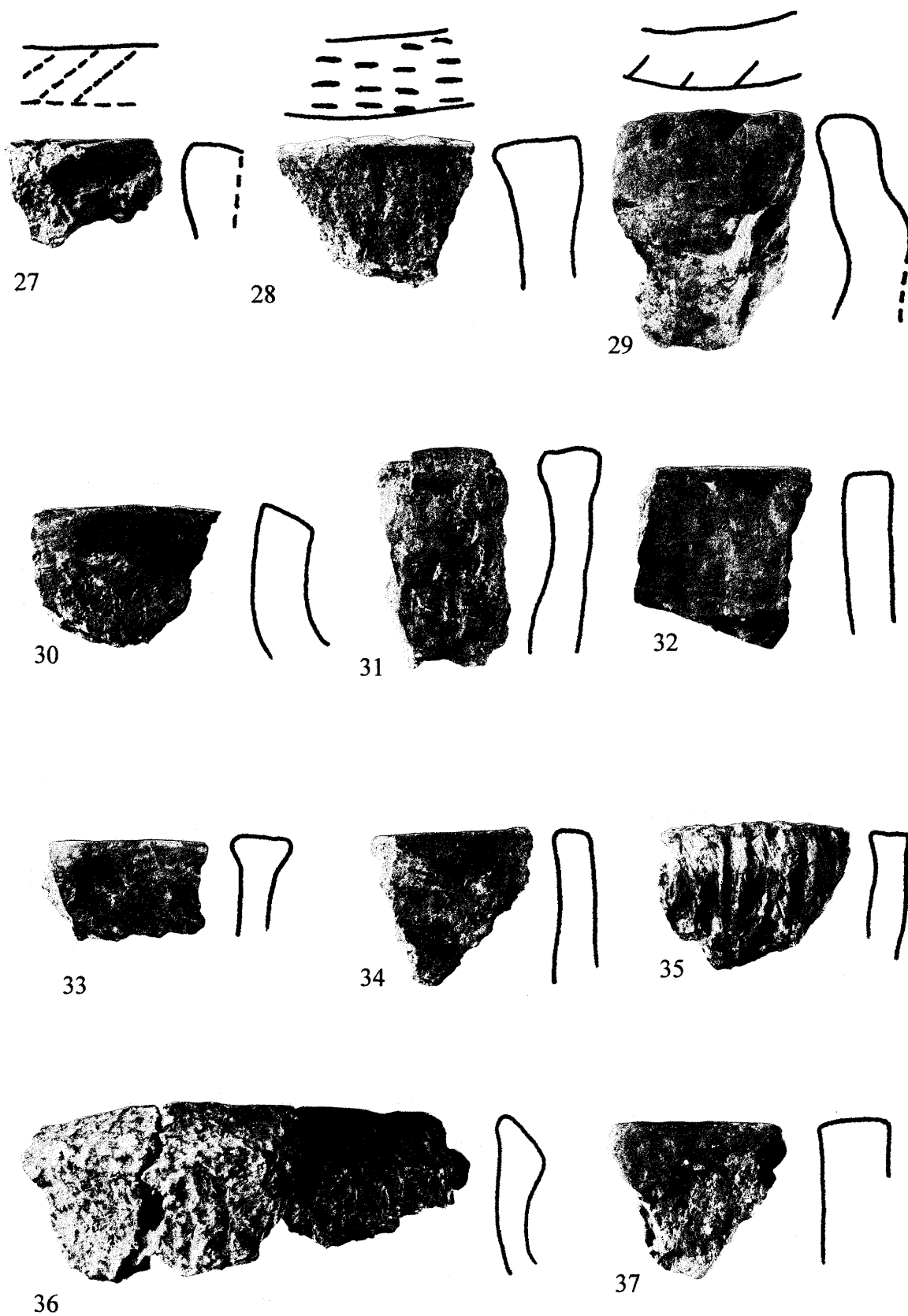
The vessel has a vertical rim profile. The square lip is 8.3 to 9.2 mm thick. Rim thickness ranges from 10.0 to 10.5 mm.

Vessel 31

One undecorated rim sherd represents this vessel.

The blocky paste contains a sparse amount of grit temper particles ranging in size from 1.1 to 2.1 mm across. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears vertically oriented cord roughening that has been smoothed. The interior is smooth with faint striations.

The rim profile is unassignable. The lip shape is expanding with a flat 9.73 mm thick surface. The interior of the rim is slightly concave but the exterior is flat. The rim is 6.9 mm thick 25 mm below the lip edge.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 32

One undecorated rim sherd represents this vessel.

The compact paste contains a sparse quantity of sand temper particles measuring less than 1.0 mm across. The exterior surface is smooth obliterating any traces of an underlying surface treatment. The interior is also smooth.

The rim profile is unassignable. The lip has a square shape with a thickness of 9.3 mm. The rim is 7.4 mm thick.

Vessel 33

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.5 to 2.2 mm. The exterior of the vessel bears lightly smoothed fabric impressions. The interior is smooth.

The rim profile is unassignable. The lip shape is expanding with a 9.1 to 9.6 mm thick, flat lip surface. The rim is 4.3 mm thick.

Vessel 34

One undecorated rim sherd represents this vessel.

The compact paste contains a sparse amount of grit temper particles measuring up to 2.4 mm across. The exterior surface has been smoothed so that the underlying surface treatment cannot be distinguished. There are several striations created by the smoothing. The interior of the vessel is smooth with an encrustation of carbonized residue.

The rim profile is unassignable. The square lip is 7.3 mm thick, and the rim is 7.1 mm thick.

Vessel 35

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles measuring 0.6 to 2.9 mm across. The exterior bears vertically oriented cord roughening that extends onto the lip of the vessel. The rough interior surface demonstrates no evidence of smoothing.

The vessel has an S-rim profile. The lip has a square shape, and the flat lip is 5.8 mm thick. The rim is 5.7 mm thick.

Vessel 36

Five undecorated rim sherds, three of which are conjoinable, represent this vessel.

The paste is slightly laminated with some exfoliated areas, and contains sparse amount of grit temper particles ranging in size from 1.3 to 5.0 mm. The exterior bears fabric impression. A thin encrustation of carbonized residue coats the smooth interior.

The vessel has a wedge rim profile. The smoothed lip is 4.2 mm thick. The distance between the lip and rim angle is 12.3 mm. The rim is 6.8 mm thick.

Vessel 37

One undecorated rim sherd represents this vessel.

The paste is laminated and exfoliated and missing most of the exterior. There is a heavy quantity of grit temper particles ranging in size from 0.9 to 3.1 mm. The exterior surface is missing. The interior is smooth with several horizontal striations.

The rim profile is unassignable. The square lip has an 11.7 mm thick, flat surface.

Vessel 38

Fifty-six sherds, many of which are conjoinable, have been assigned to this vessel. An area extending from the lip to the body has been reconstructed

The paste varies from compact to slightly laminated and contains a sparse quantity of grit temper particles ranging in size from 0.5 to 3.5 mm across. The exterior surface bears vertically oriented cord roughening that is smoothed in several areas and nearly obliterated near the base. The interior of the rim is lightly smoothed, but most of the interior is unsmoothed leaving a rough and uneven surface.

This vessel may be an example of firing damage. The broken edges of many of the sherds are fired the same colour as the outer surface. This suggests that the vessel broke during firing, and the broken surfaces were fired.

The diameter of the vessel orifice is 15 cm. This vessel has a vertical rim profile, and the lip has an interior flange. The shoulder is rounded and the base is rounded. Lip thickness ranges from 11.8 to 14.2 mm. The rim thins to 7.4 to 8.7 mm. The neck is 9.2 mm thick. The neck/shoulder is as thin as 7.1 mm. The rounded shoulder is 11.4 mm thick. The body thickness ranges from 7.8 to 12.8 mm.

This vessel is undecorated.

Vessel 39

One undecorated rim sherd represents this vessel.

The paste is compact with a medium amount of tiny sand and grit temper particles measuring up to 2.1 mm across. The exterior surface treatment has been obliterated by smoothing. The interior is smooth.

The vessel profile is unassignable, and the lip has a square lip. The smooth lip is 7.0 mm thick. The rim is also 7.0 mm thick.

Vessel 40

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.3 to 2.0 mm. Tiny mica particles are also visible in the paste. The exterior surface has been obliterated by smoothing. The interior is smooth.

The rim profile is unassignable. The lip is square and 9.1 mm thick. The rim is 8.0 mm thick.

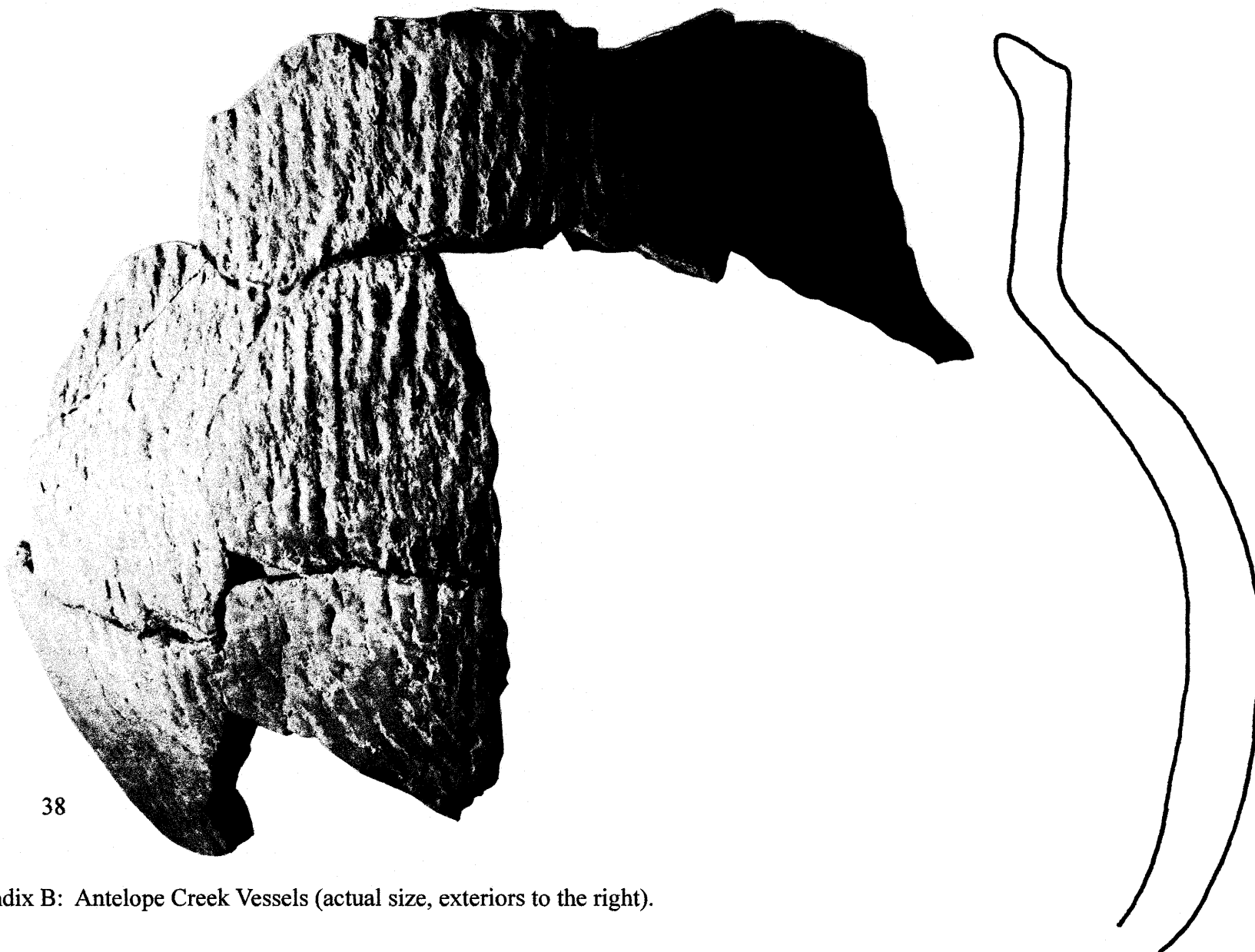
Vessel 41

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.6 to 3.4 mm across. The exterior surface of the vessel bears lightly smoothed fabric impressions. The interior is smooth.

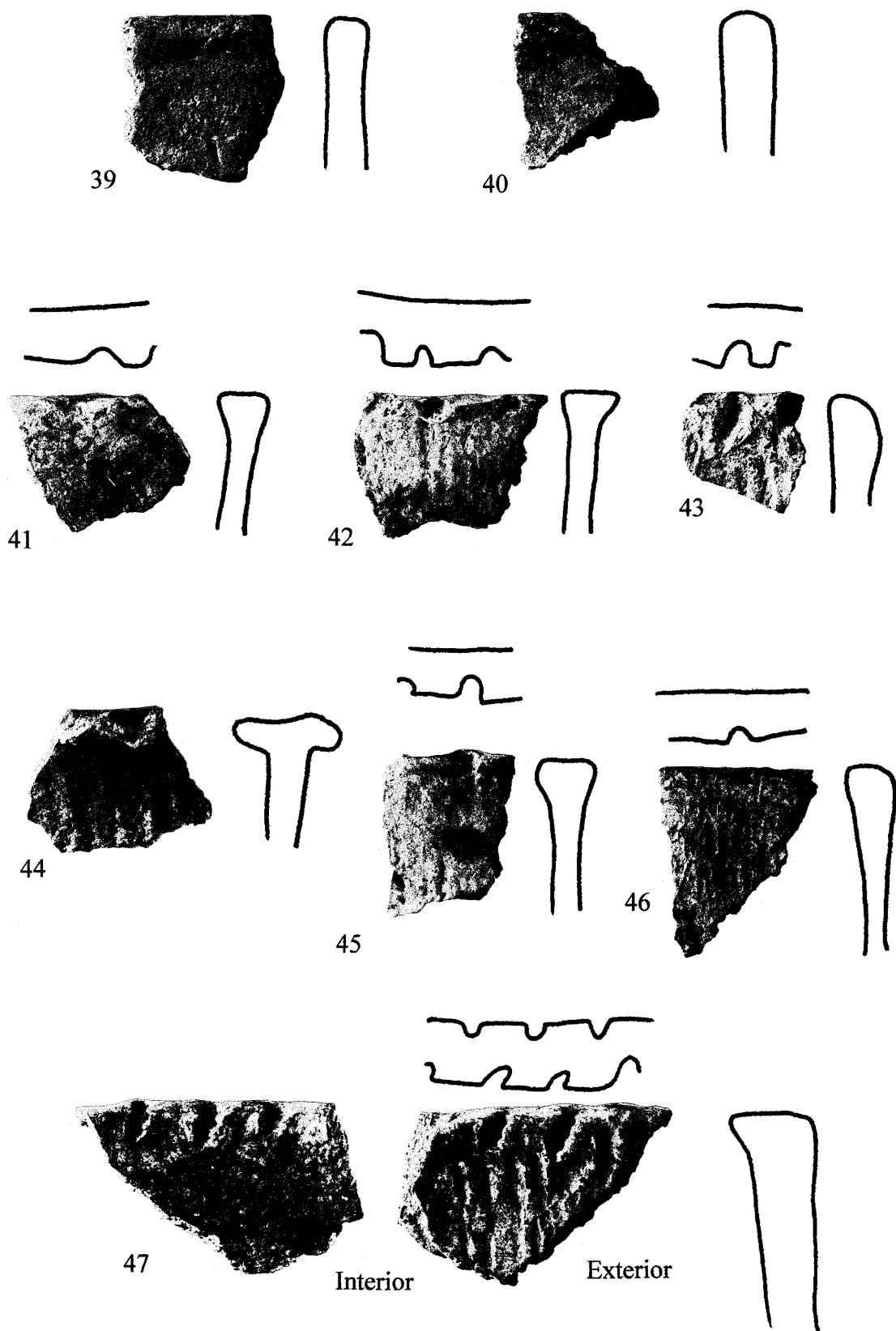
The rim profile is unassignable. The lip shape is expanding and 8.18 mm thick. The rim thins to 5.1 mm.

Decoration on this vessel is limited to the outer lip edge. It appears that the outer lip edge was pinched creating a broad, shallow 6.2 mm wide notch beside a jutting-out node. A portion of a fingerprint is visible on the lip surface.



38

Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 42

Two rim sherds represent this vessel

The blocky paste contains a medium amount of grit temper particles ranging from 1.5 to 2.1 mm across. The exterior surface bears smoothed vertically oriented cord roughening. The interior is smooth.

The rim profile is unassignable. The lip is expanding with a 9.0 to 10.4 mm thick, flat lip surface. The rim thins to 4.4 mm.

Decoration on the vessel is limited to the outer lip edge which bears small notches that were created by pressing a round edged object into the paste. The notches are 3.6 to 3.9 mm wide and spaced 4.2 to 5.6 mm apart.

Vessel 43

One rim sherd represents this vessel.

The compact paste contains a sparse amount of grit temper particles measuring up to 1.9 mm across. The exterior of the vessel bears vertically oriented cord roughening. An encrustation of carbonized residue coats the smooth interior.

The vessel profile is unassignable. The lip has a square interior edge with a rounded exterior edge and is 8.5 mm thick. The rim is 6.4 mm thick.

Decoration is limited to the outer lip edge. Notches have been created by pressing a round edged object into the vessel. The notches are 4.4 mm wide and 10.3 mm long and are spaced 4.9 mm apart.

Vessel 44

One rim sherd represents this vessel.

The compact paste contains many tiny flecks of mica and a medium amount of grit temper particles measuring 1.0 to 2.5 mm across. The exterior of the vessel bears vertical cord roughening that has been somewhat smoothed. The interior is smooth with horizontal striations.

The rim profile is unassignable. The lip has a T shape. The surface is flat and 17.3 mm thick. The rim is 5.7 mm thick.

The only decoration present on this sherd is a single impression on the outer lip edge that appears to have been made by a fingernail.

Vessel 45

One rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper particles measuring up to 2.3 mm across. The exterior of the vessel bears vertically oriented cord roughening that has been smoothed. The interior is also smooth.

The vessel profile is unassignable. The lip is expanding and 8.6 mm thick. The rim thins to 4.9 mm.

Decoration is limited to the outer lip edge which bears small notches that were created by pressing a round edged object into the clay. The impressions are 3.8 mm wide, 6.0 mm long and spaced 8.9 mm apart.

Vessel 46

One rim sherd represents this vessel.

The compact paste contains a sparse amount of grit temper particles ranging in size from 1.3 to 5.5 mm. The exterior of the vessel bears fine vertically oriented cord roughening. The interior is smooth and blackened by carbonized residue.

This sherd is very thin with an unassignable rim profile. The lip profile is expanding with a flat, 7.9 mm thick lip surface. The rim is 4.3 mm thick.

The outer lip edge is decorated with tiny, shallow notches. One 3.2 mm wide notch is present on the outer lip edge.

Vessel 47

Four rim sherds represent this vessel.

The paste texture varies from compact to slightly laminated and contains a medium amount of grit temper particles measuring 0.8 to 4.3 mm across. The exterior bears lightly smoothed, vertically oriented cord roughening. The interior is smooth with a thin coating of carbonized residue.

The rim profile is unassignable. The lip has an interior flange, and the flat surface is 10.5 to 13.1 mm thick. The rim thins to 7.8 mm.

The inner and outer lip edges of this vessel are decorated with CWT impressions that extend 9.3 mm onto the rim. The impressions are oriented in a slightly right oblique direction. They create a notched appearance on the inner and outer lip edges. The impressions are 2.6 mm wide with 5 to 6 loops per centimetre.

Vessel 48

One rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 0.9 to 2.5 mm. The vessel exterior bears lightly smoothed vertically oriented cord roughening. A thick encrustation of carbonized residue coats the interior and exterior surfaces.

The rim profile is unassignable. The square lip has a 10.7 to 11.5 mm thick, flat surface. The rim thins to 6.9 mm.

Shallow, wide notches decorate the outer lip edge. They are 8.2 mm wide and spaced 9.9 to 12.3 mm apart.

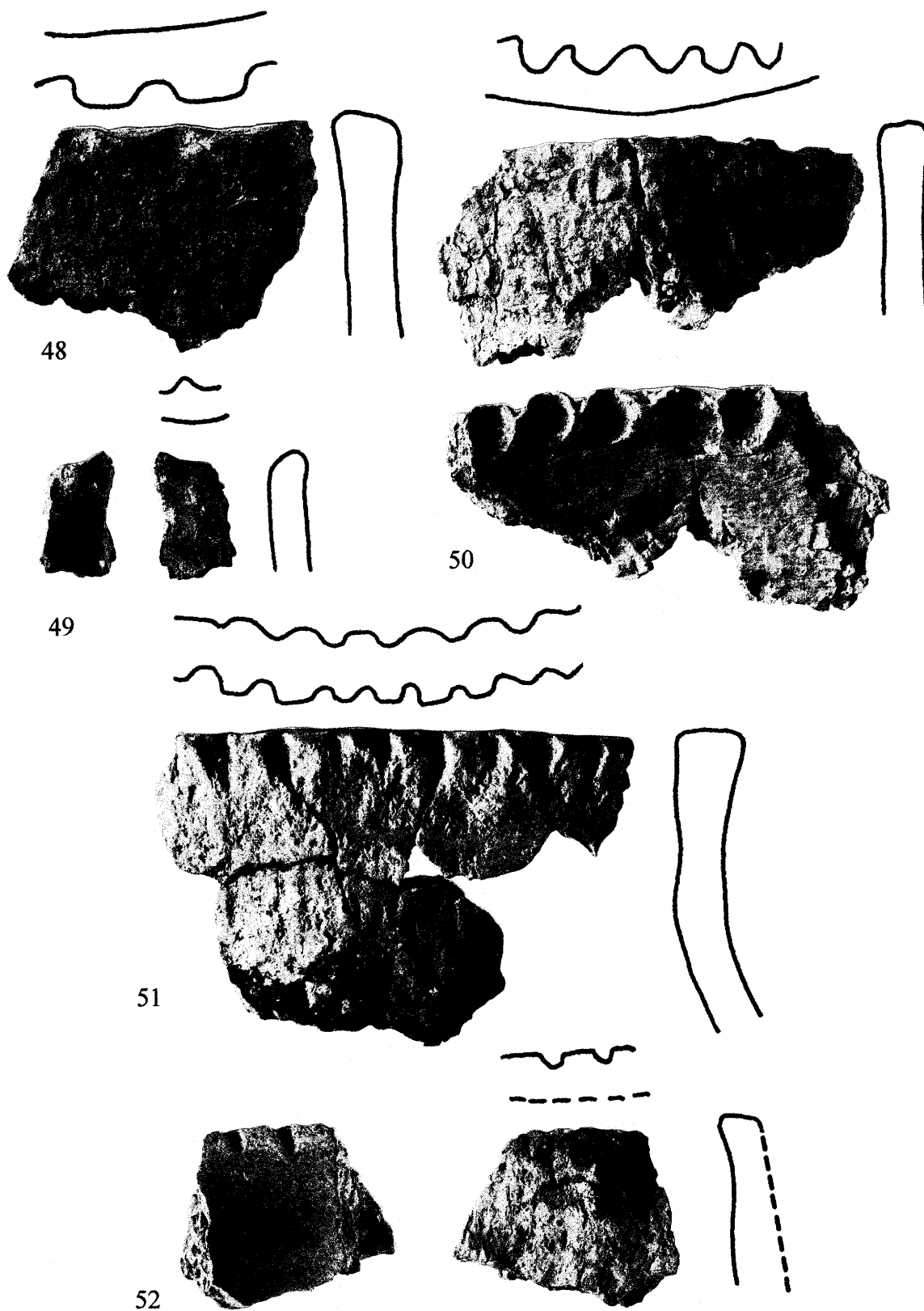
Vessel 49

One rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper particles measuring less than 1.9 mm across. The exterior surface exhibits a check stamp pattern. The squares are 3.3 mm square and spaced 1.7 mm apart. A thin encrustation of carbonized residue coats the smooth interior.

The rim profile is unassignable. The 6.6 mm thick square shaped lip has a flat surface.

Notches were created by pressing a round edged object against the inner lip edge. These converging, shallow notches are 7.9 mm long and 4.0 mm wide.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 50

This vessel is represented by four rim sherds, including two that are conjoinable.

The laminated and friable paste contains a medium amount of large, grit temper particles measuring up to 5.0 mm across. The exterior of the vessel bears lightly smoothed, vertically oriented cord roughening, and the interior is smooth with temper particles protruding from the surface.

This vessel has a vertical rim profile and a square lip profile. Lip thickness ranges from 8.0 to 10.2 mm, and the rim is 7.5 to 8.2 mm thick.

Decoration is present on the inner lip edge. Notches were created by pressing a rounded object into the paste. This created a scalloped appearance on the interior of the vessel. The impressions are 5.7 mm wide and are spaced between 2.6 and 6.4 mm apart.

Vessel 51

This vessel is represented by 21 sherds. An area extending from the lip to the neck has been reconstructed, and several portions of the lip surface have been refitted.

The compact paste contains a medium amount of grit temper particles measuring 0.6 to 4.2 mm across. There are also tiny flecks of mica visible in the paste. Smoothing obliterated the underlying surface treatment on the vessel exterior. An encrustation of carbonized residue coats the smooth interior.

The vessel has a vertical rim profile. The lip is slightly expanding with a flat 10.1 to 11.2 mm thick lip. The rim is 7.9 to 9.2 mm thick, and the neck is 7.8 mm thick.

The inner and outer lip edges have been decorated with broad edged tool impressions creating a notched appearance on the lip edges. The notches are 4.5 mm wide and spaced 4.4 to 6.1 mm apart.

Vessel 52

One rim sherd represents this vessel.

The laminated and exfoliated paste contains a sparse quantity of grit temper particles ranging in size from 1.1 to 3.2 mm. The exterior surface is exfoliated. The interior is burnished.

The rim profile is unassignable. The lip has an exterior bevel. Thickness cannot be determined because the exterior is exfoliated.

Left oblique CWT impressions decorate the inner lip edge. These are 4.4 mm long and spaced about 7.0 mm apart.

Vessel 53

Twenty sherds have been assigned to this vessel, and an area extending from the lip to the neck/shoulder has been reconstructed. Approximately 45% of the rim is present.

The compact paste contains a sparse amount of grit temper particles ranging in size from 1.0 to 2.5 mm. Tiny mica particles are also present on the interior and exterior surfaces. The exterior of the vessel bears vertically oriented cord roughening that has been lightly smoothed. A thin encrustation of carbonized residue coats the smooth interior.

This vessel has an orifice diameter of 26 cm. This vessel has a vertical rim profile and the lip has an interior bevel. The lip is 9.0 mm thick, and the rim is 7.8 mm thick.

The neck angle thickens to 9.3 mm, and the vessel thins to 5.3 mm thick in the neck/shoulder region.

Decoration is limited to the lip edges. The outer lip edge exhibits notches that were created by pressing a broad edged object into the clay. These notches create a scalloped appearance on the outside of the vessel. The impressions are 4.6 to 5.3 mm wide and spaced 3.9 to 8.3 mm apart. The interior lip edge exhibits 11.2 mm wide indentations that were created when the interior of the vessel was pulled towards the exterior. The spacing of these indicates that the vessel was quartered.

Vessel 54

Sixteen sherds have been assigned to this vessel. An area extending from the lip to the neck has been reconstructed, and several shoulder and body sherds have also been reconstructed.

The blocky, slightly laminated paste contains a sparse amount of grit temper with particles ranging in size from 0.8 to 4.4 mm. The exterior bears coarse fabric impression, and a heavy encrustation of carbonized residue coats the smooth interior.

The rim has a vertical profile, and the smooth lip has an interior bevel. The angled shoulder sherds cannot be refitted with the neck/shoulder area so a complete reconstruction of the vessel profile is not possible. The lip is 11.3 mm thick and the rim is 8.1 mm thick. The neck thickens to 10.6 mm, and the shoulder is 7.5 to 10.5 mm thick.

The inner lip edge exhibits notches that were created by pressing a broad edged tool into the clay. The notches are 7.3 mm wide and spaced 7.0 to 10.5 mm apart. These impressions create a scalloped appearance on the inner lip edge. There is also evidence that the vessel may have been quartered. Two of the sherds exhibit indentations on the inner lip edge where the vessel was pulled towards the exterior. A trace of a finger print is visible on one of the indentations.

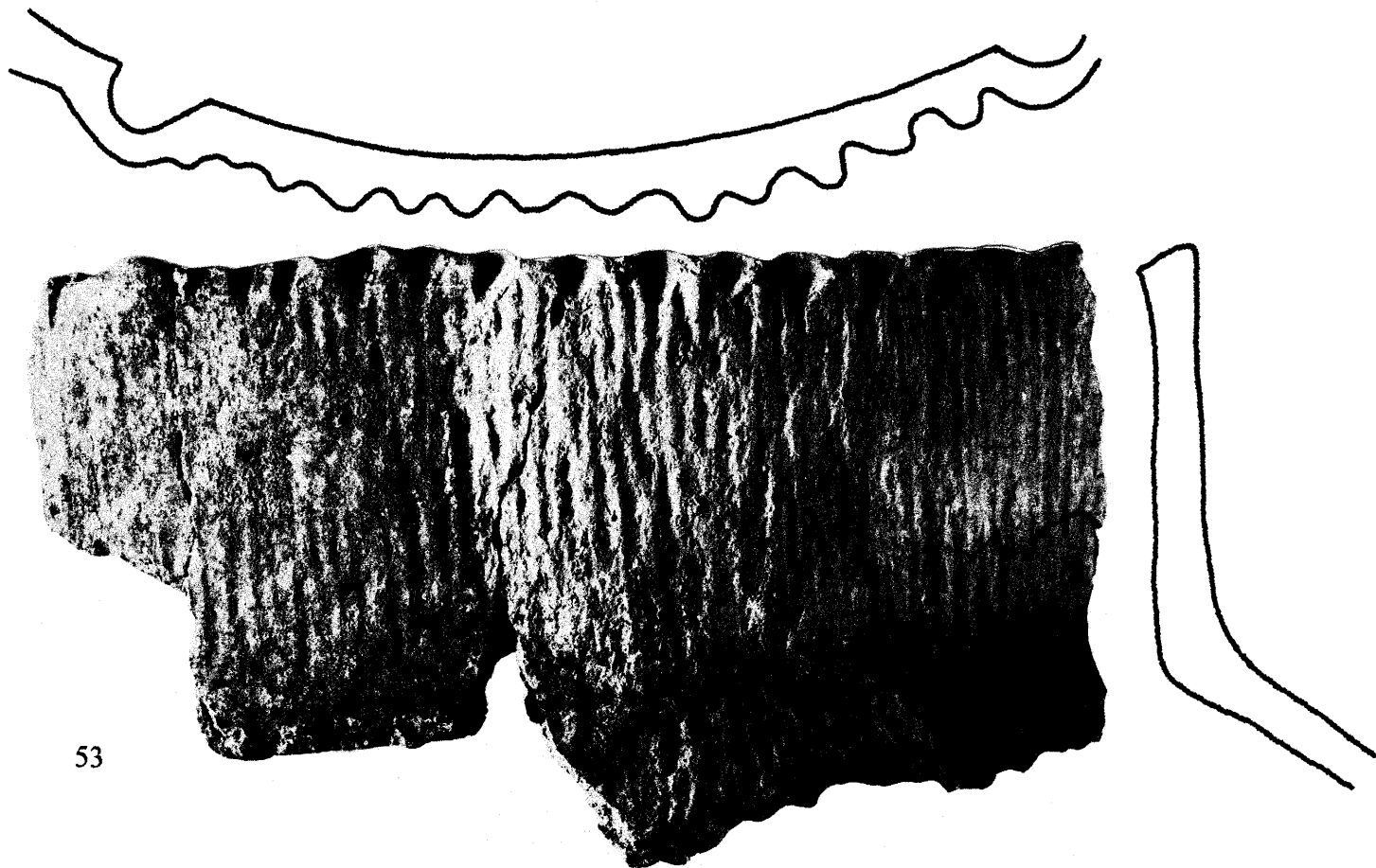
Vessel 55

Four rim sherds represent this vessel

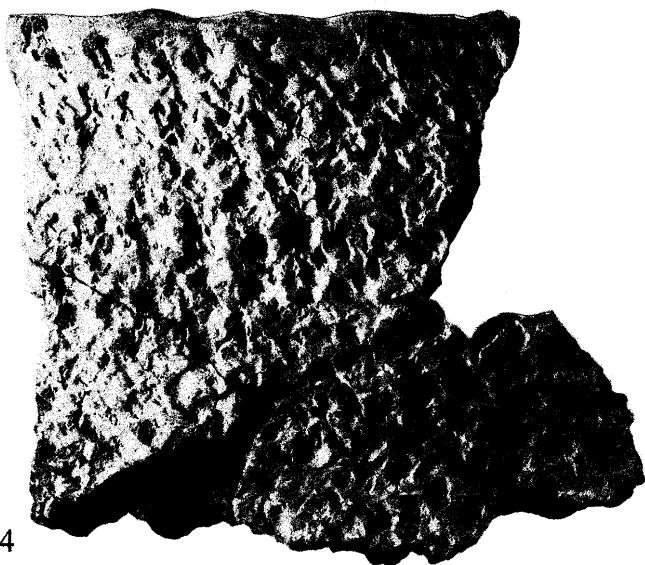
The blocky paste contains a heavy quantity of grit temper particles measuring less than 2.0 mm across. The exterior surface has been smoothed to the point that the underlying surface treatment can no longer be determined. The interior is smooth with a slight ridge 7 mm below the lip edge where excess clay was pressed down.

The vessel profile is unassignable, but the lip has a slight interior bevel. The flat surface is 13.3 to 14.2 mm thick. The rim thins to 6.6 mm at 25 mm below the lip edge.

The lip surface is decorated with left oblique dentate impressions. The impressions are 1.2 mm wide with an average tooth length of 1.5 mm.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).



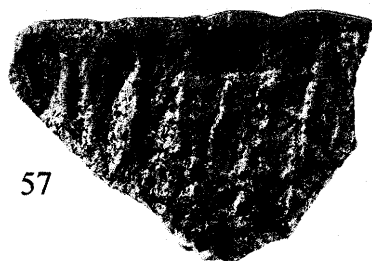
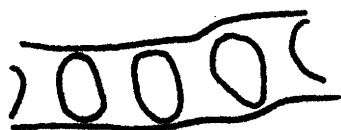
54



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56



57



58



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 56

Four rim sherds, two of which are conjoinable, represent this vessel.

The laminated paste contains a sparse quantity of grit temper particles measuring up to 2.0 mm across. The exterior of the vessel bears heavily smoothed vertically oriented cord roughening. The interior is smooth with an encrustation of carbonized residue.

This vessel has a vertical rim profile. The lip is square. Lip thickness ranges from 7.8 to 8.8 mm, and the rim is 7.7 to 8.6 mm thick. The thickest portion of these sherds is the neck area which is 12.2 mm thick.

Decoration on this vessel is restricted to the lip surface. The lip bears vertically oriented sharp edged tool impressions that extend across the entire lip surface. They are spaced 4.3 to 8.5 mm apart.

Vessel 57

Five non-conjoinable rim sherds represent this vessel.

The compact paste contains a sparse amount of small grit temper particles measuring up to 2.0 mm across. The exterior of the vessel bears vertically oriented cord roughening, and the interior is smooth. An encrustation of carbonized residue coats the interior and exterior surfaces.

The rim profile is unassignable, but the lip has an expanding profile. The lip is 12.0 mm thick and the rim thins to 5.6 mm.

The lip surface is decorated with finger impressions that are filled with carbonized residue. These impressions are about 6 mm apart

Vessel 58

Two conjoinable rim sherds represent this vessel.

The compact paste contains a sparse amount of sand temper particles measuring less than 1.5 mm across. The exterior surface bears vertically oriented cord roughening that has been lightly smoothed. The interior is smooth.

The rim profile is unassignable. The lip shape is slightly expanding with a 7.4 to 9.5 mm thick rounded surface. The rim is 6.52 mm thick.

Round edged tool impressions decorate the lip surface. They are 2.6 to 3.8 mm wide and extend across the lip surface. They are spaced 5.3 to 7.3 mm apart.

Vessel 59

Two rim sherds represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.0 to 3.9 mm. Smoothed, vertically oriented cord roughening is present on the exterior surface. A thin layer of carbonized residue coats the smooth interior.

The rim profile of the vessel is unassignable. The lip shape is expanding with a flat surface. The lip thickness ranges from 8.6 to 14.8 mm. The rim is 6.2 mm thick.

The lip surface is decorated with converging stamps. One portion of the rim has a thickened area that is decorated with the stamps in a bird foot pattern. The stamps are 2.3 mm wide and 6.3 to 7.7 mm long.

Vessel 60

Two conjoinable rim sherds represent this vessel.

The compact to slightly laminated paste contains a medium amount of grit temper particles measuring between 1.5 and 4.4 mm across. The exterior surface exhibits heavily smoothed fabric impressions. The interior is smooth with faint horizontal striations.

The rim profile cannot be determined. The lip shape is expanding with a flat lip surface. Lip thickness is 9.0 mm, and the rim has a minimum thickness of 5.8 mm.

Ovoid stamps decorate the lip surface. These stamps are 2.5 mm wide and 7.2 mm long and an average of 5 mm apart.

Vessel 61

One rim sherd represents this vessel.

The compact paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. Smoothing has obliterated the underlying surface treatment. The interior is smooth with a thin layer of carbonized residue.

This vessel has an S-rim profile. The 8.4 to 8.6 mm thick, flat lip has an interior bevel. The rim thins to 6.2 mm.

A single ovoid stamp on the lip surface is the only decorative element on this sherd. The stamp is 8.1 mm long and 2.9 mm wide.

Vessel 62

One rim sherd represents this vessel.

The compact paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. The underlying exterior surface treatment has been obliterated by smoothing. The interior is smooth.

The rim profile is unassignable. The lip shape is slightly expanding with an interior bevel. The lip is 8.8 to 9.3 mm thick, and the rim thins to 5.2 mm.

The lip surface is decorated with ovoid stamps that are 3.1 mm wide and 6.7 mm long. The two on this sherd are 13.2 mm apart.

Vessel 63

One small rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper particles measuring up to 2.0 mm across. The exterior surface bears vertically oriented cord roughening. The interior is smooth with a thin coating of carbonized residue.

The rim profile is unassignable. The expanding lip has a flat, 11.5 mm thick surface. The rim thins to 5.9 mm.

The lip has a portion of a left oblique, 3.1 mm wide broad edged tool impression.

Vessel 64

One rim sherd represents this vessel.

The paste is thin and compact with a medium amount of grit temper particles ranging in size from 1.5 to 2.8 mm. The exterior of the vessel bears vertically oriented cord roughening. The interior is smooth.

The rim profile is unassignable, and the lip shape is expanding. The flat lip surface is 7.0 mm thick, and the rim thins to 5.6 mm.

Oval stamps decorate the lip surface. The stamps are 3.3 mm wide and 6.5 mm long and spaced 6.9 to 7.6 mm apart.

Vessel 65

One small rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.5 to 3.3 mm across. The exterior surface treatment is obliterated by smoothing. The interior is smooth.

This vessel has an unassignable rim profile. The slightly expanding lip has a 6.9 mm thick flat lip surface. The rim thins to 5.9 mm.

The lip surface is decorated with a 2.7 mm wide groove that was created by pressing a round edged object into the lip surface.

Vessel 66

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 0.9 to 1.2 mm. The exterior surface treatment is indeterminate. A thin encrustation of carbonized residue coats the smooth interior.

The rim profile is unassignable. The lip shape is expanding with a flat 12.2 mm thick surface. The rim thins to 5.2 mm.

The lip surface is decorated with vertically oriented round edged tool impressions that extend across the lip surface.

Vessel 67

Four rim sherds, two of which are conjoinable, represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.0 to 2.1 mm. The exterior of the vessel bears vertically oriented cord roughening and the interior is smooth. An encrustation of carbonized residue coats the interior and exterior of the vessel.

This vessel has a vertical rim profile, and the lip shape is expanding. The flat lip surface is 10.1 to 14.5 mm thick and the rim thins to 5.9 mm.

Decoration on this vessel is restricted to the lip surface which is incised with a single line forming a groove around the circumference of the vessel. This groove is 2.8 mm wide and 1.1 mm deep.

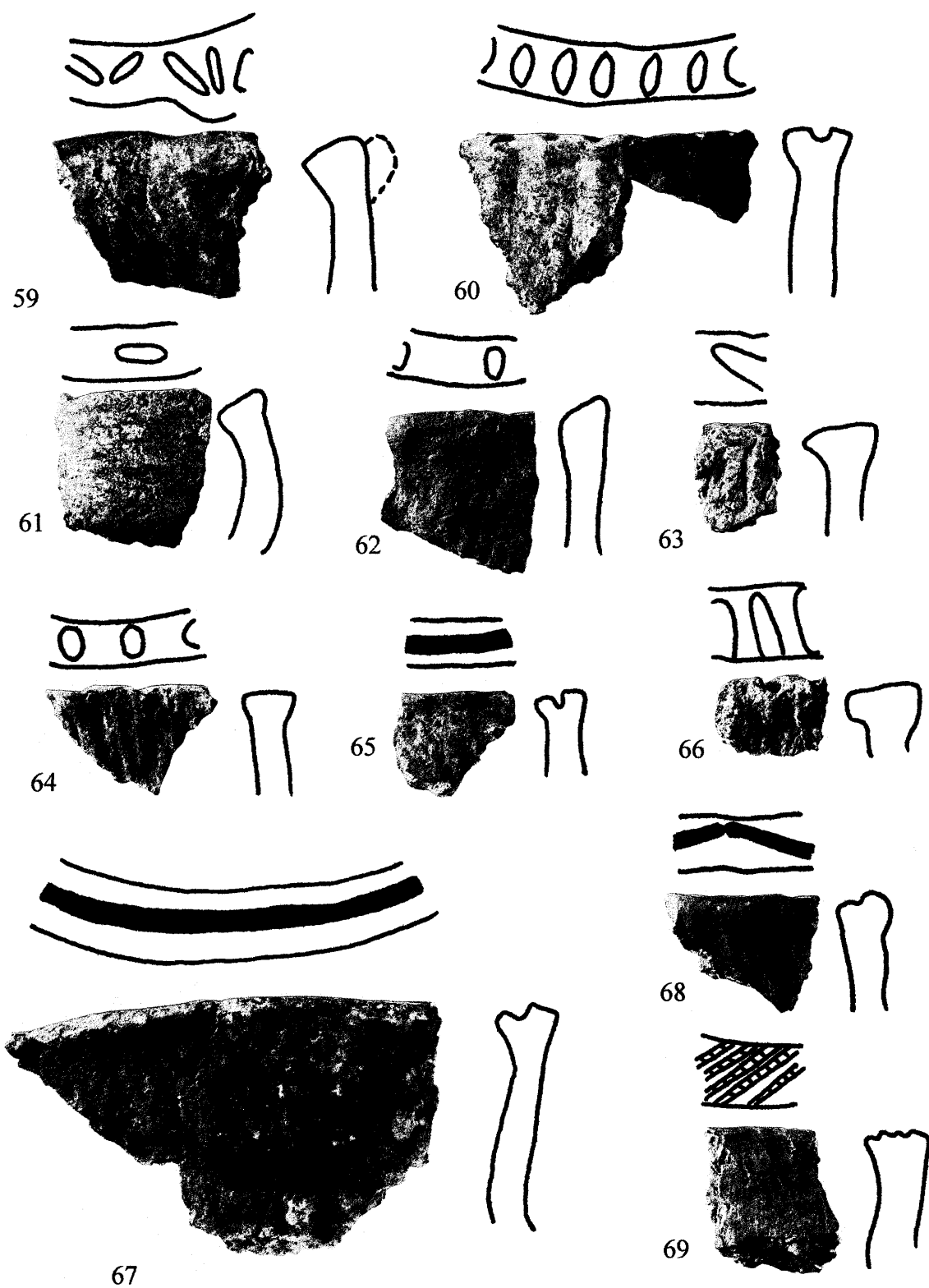
Vessel 68

One rim sherd represents this vessel.

The compact paste contains a sparse amount of small grit temper particles measuring up to 2.0 mm across. The exterior surface bears vertically oriented cord roughening. The interior surface is smooth, and the interior and exterior surfaces are coated with an encrustation of carbonized residue.

The rim profile is unassignable, but the lip has an expanding profile. The flat lip is 9.3 mm thick, and the rim thins to 5.2 mm.

The lip surface is decorated with incised lines in a 1.6 mm thick zigzag line.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 69

Two rim sherds represent this vessel.

The blocky paste contains a medium amount of grit temper particles measuring up to 4.8 mm across. The exterior surface has been smoothed to the point that the underlying surface treatment is obliterated. The interior is smooth with faint striations.

The rim profile is unassignable. The lip shape is square. The flat surface is 9.8 mm thick, and the rim thins to 7.2 mm.

Decoration on this sherd is restricted to the lip surface which exhibits right oblique dentate impressions. The dentates are very small with an average size of 1.0 mm square.

Vessel 70

One rim sherd represents this vessel.

The paste is highly laminated and split up the middle. There is a sparse quantity of grit temper particles measuring 1.5 mm across and several tiny flecks of mica. The exterior bears vertical cord roughening that has been somewhat smoothed. The interior is very smooth.

This vessel has an S-rim profile and an expanding lip. The lip is 6.5 mm thick and the rim thins to 4.7 mm.

The lip surface is decorated with ovoid stamps that are 2.5 mm wide and 4.8 mm apart.

Vessel 71

One rim sherd represents this vessel.

The slightly laminated paste contains a medium amount of grit temper particles ranging in size from barely visible up to 5.5 mm across. The exterior of the vessel bears lightly smoothed fabric impressions, and the interior is smooth with a thin coating of carbonized residue.

The rim profile is unassignable, but the lip shape is expanding. The lip is 10.4 mm thick, and the rim thins to 5.2 mm.

The lip is decorated with circular punctates about 5.0 mm wide and 6.6 mm apart. The deepest punctate is 5.3 mm deep.

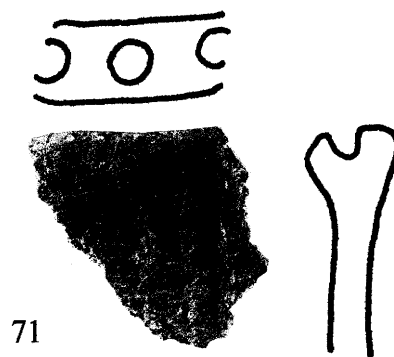
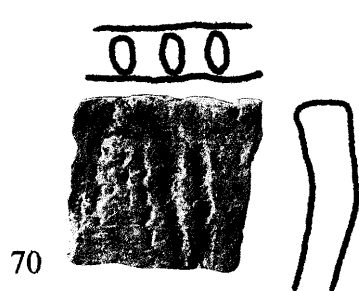
Vessel 72

Four sherds have been assigned to this vessel representing an area extending from the lip to the neck/shoulder.

The dense and compact paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. The exterior surface has been smoothed to the point that the underlying surface treatment can no longer be discerned. The interior is smooth with numerous striations.

This vessel has a vertical rim profile. The lip shape is slightly expanding with a flat surface. The neck has a sharp angle. The lip is 8.9 mm thick and the thinnest portion of the neck is 5.5 mm. The neck angle thickens to 7.1 mm and the neck/shoulder is 5.6 mm thick. An interesting characteristic of this vessel is that the rim height varies around the vessel circumference. Two of the sherds exhibit this wavy appearance.

The only decoration on this vessel is ovoid stamping on the lip surface. These stamps are 3.3 mm wide 7.9 mm long and spaced 4 to 5 mm apart.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Vessel 73

This vessel is represented by four rim sherds, including two that are conjoinable.

The slightly laminated paste contains a medium amount of grit temper particles ranging in size from 1.0 to 2.3 mm. Tiny mica flecks are also visible in the paste. The exterior surface bears vertically oriented cord roughening that has been heavily smoothed. The interior has faint horizontal striations and light carbonized residue.

The vessel has a vertical rim profile. The lip is slightly expanding with rounded to flat lip. The lip is 9.2 to 11.5 mm thick, and the rim is 7.3 to 8.8 mm thick.

The lip surface is burnished, and the rim is decorated with an incised line placed 10.7 to 14.0 mm below the outer lip edge. On this incised line there are several small holes that go right through the rim and one small punctate that does not go right through. They are about 3 mm wide. The holes are unevenly spaced. One sherd has three holes in a 43 mm section of rim, while one 78 mm rim section has only one hole.

Vessel 74

Three rim sherds, two of which are conjoinable, represent this vessel.

The compact to slightly laminated paste contains a medium amount of grit temper particles measuring up to 2.0 mm across. The exterior surface of the vessel bears fabric impression that extends onto the lip surface. A thin encrustation of carbonized residue coats the smooth interior.

The rim profile is unassignable, but the lip shape is slightly expanding with a flat surface. The lip is 9.6 to 10.7 mm thick, and the rim is 5.8 mm thick.

The rim of the vessel is decorated with a horizontal row of punctates. These were made by impressing a pointed object into the clay and moving it in a circular motion. The hole is wider at the top than it is at the bottom. The punctates are placed 5.2 mm below the outer lip edge. They are 3.3 mm deep and up to 4.7 mm wide.

Vessel 75

One rim sherd represents this vessel.

The slightly laminated paste contains a medium amount of sand and grit temper particles measuring up to 3.2 mm across. Tiny flecks of mica are also visible in the paste. The underlying surface treatment has been obliterated by the decoration. The interior is smooth.

The rim profile is unassignable. The lip shape is expanding with a rounded surface. It is 10.0 mm thick, and the rim thins to 6.7 mm.

The lip surface is decorated with three horizontal rows of CWT impressions spaced about 1.6 mm apart. The rim is decorated with a zigzag pattern of CWT impressions and below these are at least three rows of horizontally oriented CWT impressions. The CWT impressions are 2.3 mm wide with four to five loops per centimetre.

Vessel 76

This vessel is represented by one tiny rim sherd.

The compact paste contains a sparse amount of grit temper particles measuring up to 1.5 mm across. The decorative elements obliterated the underlying exterior surface treatment. The tiny portion of the interior surface that is present is smooth.

The rim profile is unassignable. The lip shape is expanding with a flat, 8.7 mm thick lip surface. The rim thins to 5.7 mm.

The lip surface is decorated with a single row of horizontally oriented dentate impressions. The outer and inner lip edges are impressed with tiny round edged objects to create small notches. These notches are 2.3 mm wide. The two on the outer lip edge are spaced 4.8 mm apart. The outer rim is decorated with at least three horizontal rows of dentate impressions. The dentate impressions are 1.4 mm wide with an average tooth length of 2.0 mm.

Vessel 77

One small rim sherd represents this vessel.

The compact paste contains a medium amount of sand and grit temper particles measuring up to 1.5 mm across. The exterior surface treatment has been obliterated by decoration. The interior is smooth with slight exfoliation.

The rim profile is unassignable. The lip shape is expanding. The flat lip surface is 10.1 mm thick, and the rim thins to 6.3 mm.

The lip surface is decorated with three horizontal rows of dentate impressions. The rim of the vessel is also decorated with a combination of right and left oblique dentate impressions. The orientation of these suggests a chevron pattern. The dentate impressions on this sherd are 1.5 mm wide with an average tooth length of 2.2 mm.

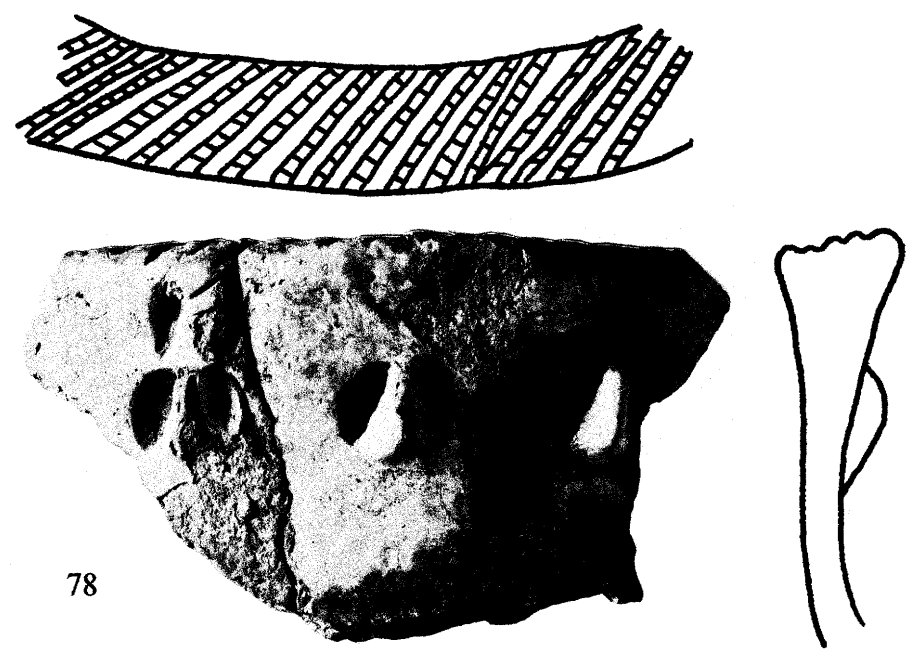
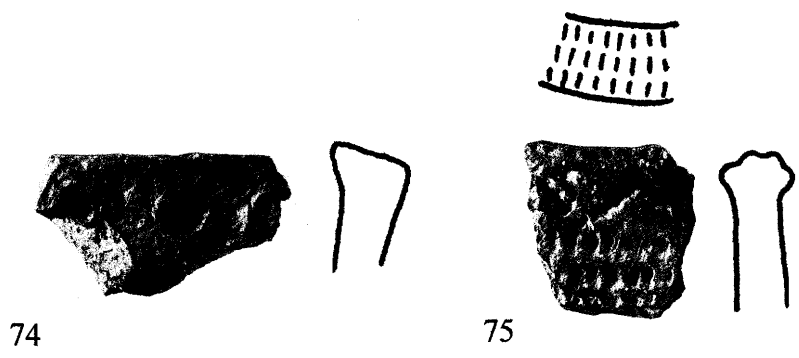
Vessel 78

This vessel is represented by three sherds including two that have been refitted to represent an area extending from the lip to the neck/shoulder.

The paste varies from compact to slightly laminated and contains a sparse amount of grit temper particles ranging in size from tiny and barely visible to one measuring 4.6 mm across. The exterior of the vessel bears a check stamp pattern that has been heavily smoothed. Some areas of the exterior are exfoliated. The checks average 3.5 mm square. The interior is very smooth.

This vessel has a vertical rim profile with an expanding, flat lip. The lip is 16.7 to 18.3 mm wide, and the rim thins to 10.2 mm. The thinnest area of the vessel is the 6.6 mm thick neck.

The lip surface is decorated with right oblique dentate impressions. These impressions are 1.1 mm wide with an average tooth length of 1.8 mm. The outer rim is decorated with finger pinches. The wet clay was pinched between the finger and thumb creating a ridge of clay between indentations. These are placed 15.6 mm below the lip and spaced 14.3 mm apart.



Appendix B: Antelope Creek Vessels (actual size, exteriors to the right).

Appendix C
Miry Creek Site Vessel Descriptions

Vessel 1

Three undecorated rim sherds represent this vessel. One large sherd extends from the lip to the neck area.

The blocky to slightly laminated paste contains tiny flecks of mica and a medium quantity of grit temper particles ranging in size from 0.5 to 3.5 mm. The exterior of the vessel exhibits vertical cord roughening that extends onto the lip surface. The interior of the vessel exhibits many horizontal striations that were formed when the interior of the vessel was smoothed. The interior of the neck is slightly blackened and has a small patch of carbonized residue.

The vessel has a vertical rim and the lip expands with a slight exterior bevel. The flat lip surface is 12.1 mm thick. The rim measures 8.6 to 9.5 mm thick.

Vessel 2

Five undecorated rim sherds, including two that are conjoinable, represent this vessel.

The slightly blocky paste contains a medium amount of grit temper particles ranging in size from 0.4 to 2.9 mm. The majority of the temper particles are smaller sized grains. The exterior of the vessel exhibits vertical cord roughening that extends onto the lip of the vessel. An encrustation of carbonized residue coats the interior.

The rim profile is unassignable. The lip has an expanding profile with a slight exterior bevel and flat, 10.6 to 13.7 mm thick lip surface. The rim is narrower than the lip, and at 15 mm below the lip is 9.2 mm thick.

Vessel 3

Two undecorated rim sherds represent this vessel.

The friable paste contains a heavy quantity of sand and grit temper particles. One particle measures 4.9 mm across, but the majority are less than 1.0 mm in size. The exterior surface treatment is obliterated. The interior is smooth.

The rim profile is unassignable. The lip is rounded and 11.9 to 12.5 mm thick.

Vessel 4

One undecorated rim sherd represents this vessel.

The paste is extremely laminated, and most of the interior is exfoliated. The paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 2.5 mm. Smoothing obliterated the underlying surface treatment on the exterior surface.

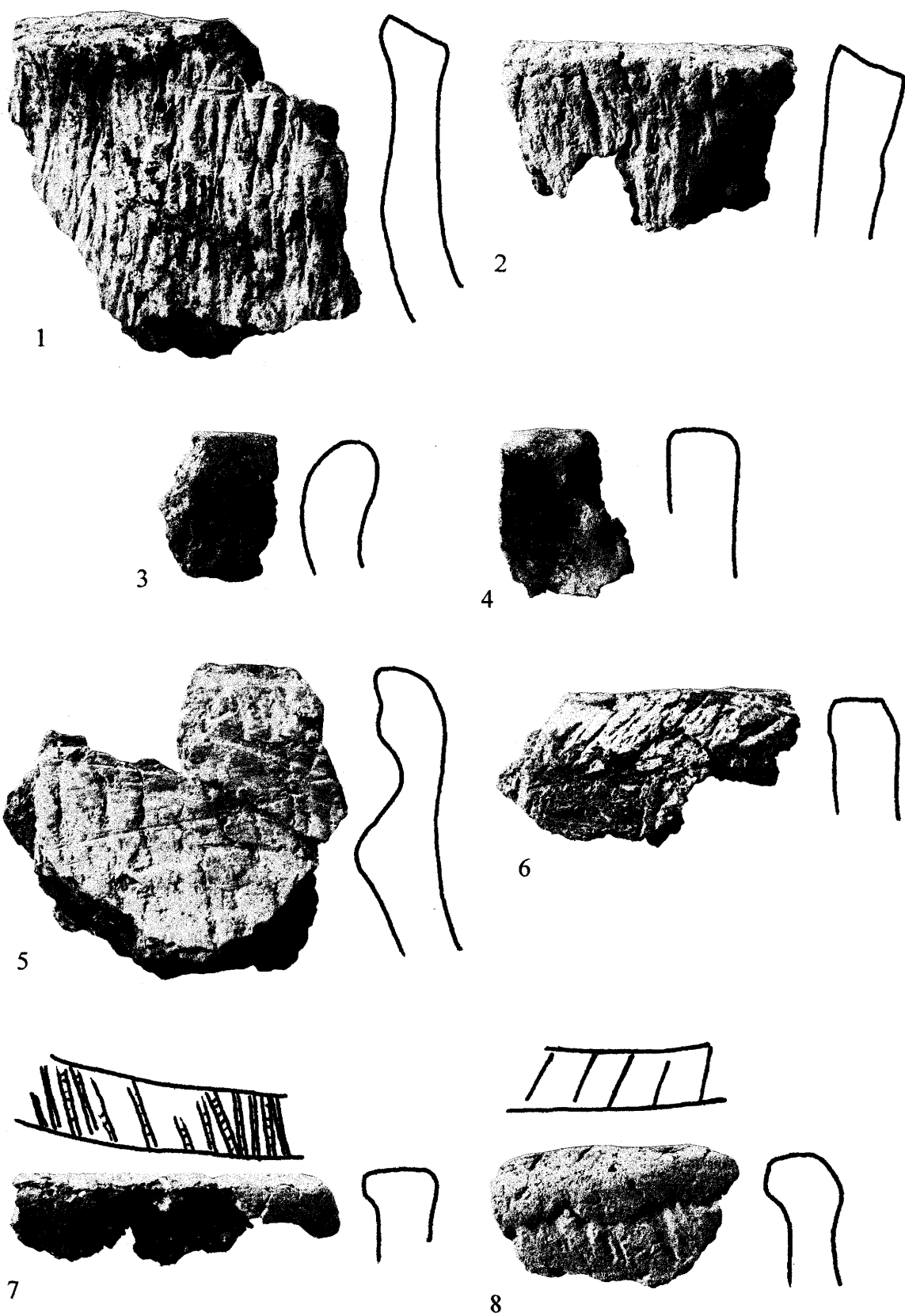
The rim profile is unassignable. The square lip has a flat 11.3 mm thick surface.

Vessel 5

Nine undecorated sherds represent this vessel. Four sherds have been refitted to form an area extending from the rim to the neck/shoulder area.

The blocky paste exhibits lamination and contains a medium quantity of grit temper particles ranging in size from 1.0 to 4.0 mm. The exterior of the vessel bears vertical cord roughening that has been lightly smoothed leaving horizontal striations. A heavy encrustation of carbonized residue coats the interior.

The exterior of the rim has a more or less vertical orientation with a concave interior. The rim is 7.0 mm thick. The neck thickens to 14.1 mm and then narrows to 8.8 mm in the neck/shoulder area. The slightly rounded lip ranges from 7.4 to 9.7 mm



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

thick. Cord roughening extends onto the lip surface and has been nearly obliterated by smoothing.

Vessel 6

Two conjoinable rim sherds represent this vessel.

The blocky paste contains a sparse quantity of sand temper particles measuring less than 1.0 mm across. The exterior surface bears vertically oriented cord roughening that has been nearly obliterated by smoothing. The top 10.0 mm of the rim bears right oblique cord roughening. Several horizontal striations were the result of smoothing the vessel. A heavy encrustation of carbonized residue coats the interior.

The rim profile is unassignable but the lip has a square shape. The 10.0 to 12.5 mm thick lip has a rough, uneven surface. The rim is 10.9 mm thick.

Vessel 7

Three conjoinable rim sherds represent this vessel.

The paste is extremely laminated and exfoliated and very little of the exterior remains. The paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 5.3 mm. The exterior surface finish is indeterminate, and the interior is smooth.

The rim profile is unassignable. The lip has an interior flange with a flat, 12.4 mm thick surface.

The lip is decorated with fine dentate impressions oriented in a left oblique direction.

Vessel 8

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 0.5 to 3.6 mm. The exterior of the vessel exhibits vertically oriented cord roughening that has been smoothed. The interior has an uneven surface.

The rim profile is unassignable. The exterior of the rim has a ridge where excess clay from the lip has been flattened against the rim. The lip is 11.1 to 11.4 mm thick and the rim narrows to 7.2 mm.

The lip is decorated with thin, incised lines oriented in a right oblique direction and spaced 4.7 to 6.5 mm apart.

Vessel 9

Two conjoinable rim sherds represent this vessel.

The blocky and slightly laminated paste contains tiny flecks of mica and a heavy quantity of coarse, grit temper particles measuring up to 4.5 mm across. Smoothing obliterated the underlying surface treatment on the vessel exterior. A thin encrustation of carbonized residue coats the lip surface and smooth interior.

The rim profile is unassignable. The lip is square with a flat, 11.4 to 12.4 mm thick surface. The rim is 11.5 mm thick and undecorated.

The lip surface is decorated with left oblique CWT impressions that are 4.9 mm wide with 4 loops per centimetre.

Vessel 10

One rim sherd represents this vessel.

The blocky paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 5.6 mm. The exterior surface finish is indeterminate, and the interior is smooth.

The rim profile is unassignable. The 9.7 to 10.0 mm thick lip is rounded, and the surface is decorated with shallow right oblique CWT impressions that have been obscured by smoothing.

Vessel 11

Six rim sherds, including two that are conjoinable, represent this vessel.

The paste is laminated and exfoliated, and four of the sherds are missing their exteriors. The paste contains a medium quantity of grit temper particles ranging in size from 0.8 to 4.0 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. Most of the interior is exfoliated.

The rim profile is unassignable. The lip is square with a 12.1 to 12.5 mm thick, flat, lip surface.

The lip surface has been decorated with right oblique tool round edged tool impressions across the lip surface. The impressions are 2.5 mm wide and spaced 3.7 mm apart.

Vessel 12

One rim sherd represents this vessel.

The blocky paste contains a sparse quantity of grit temper particles measuring less than 1.5 mm across. The exterior of the vessel exhibits vertically oriented cord roughening. The interior is smooth.

The rim profile is unassignable. The 11.2 mm thick lip is square.

The lip surface is decorated with indeterminate impressions that are nearly obliterated by smoothing.

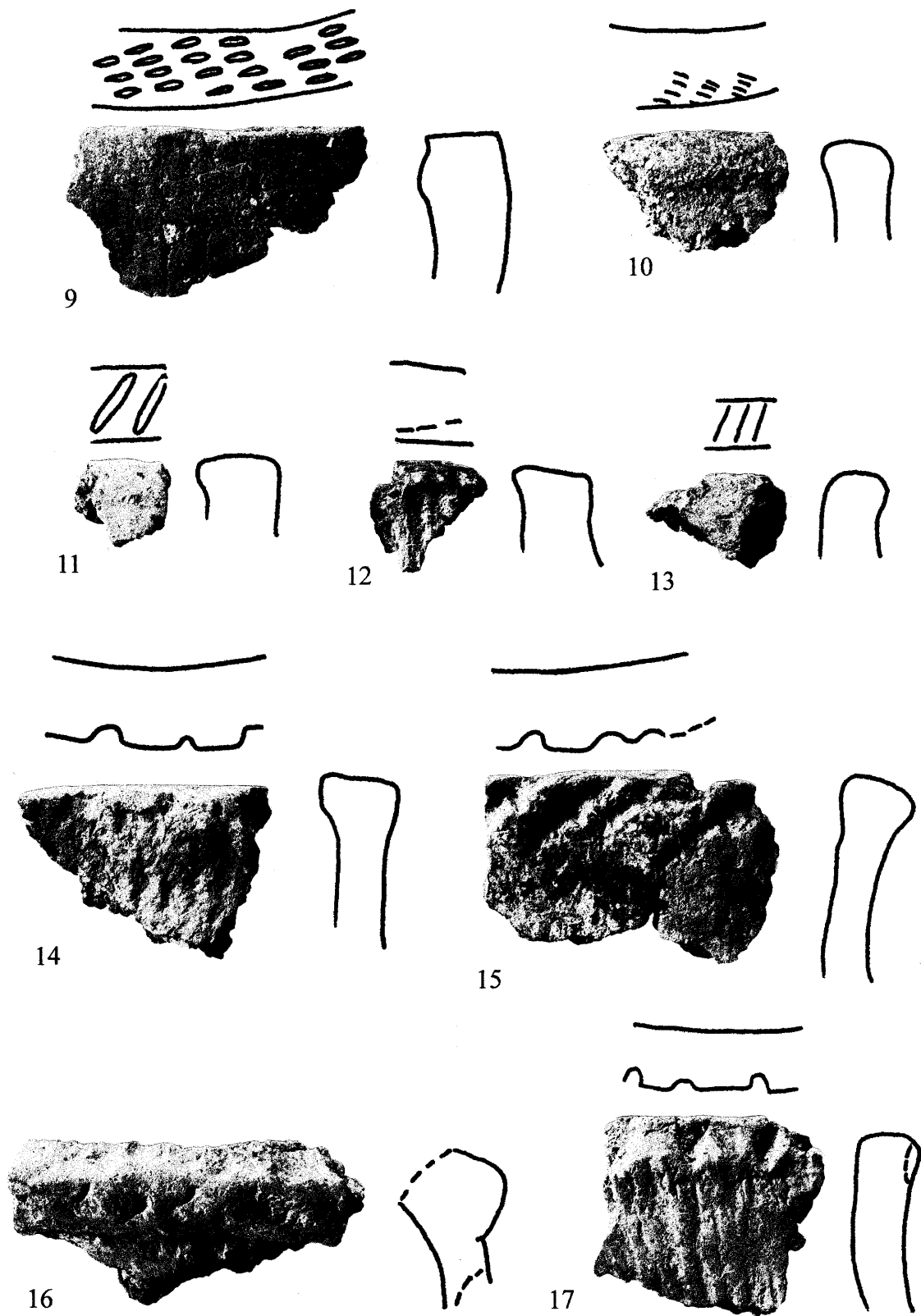
Vessel 13

One rim sherd represents this vessel.

The slightly laminated paste contains a medium quantity of grit temper particles ranging in size from 0.8 to 4.0 mm. Smoothing obliterated the underlying surface on the exterior. The interior surface is also smooth.

The rim profile is unassignable. The lip is rounded and 8.8 mm thick.

The lip surface is cord roughened. It exhibits 0.8 mm wide vertical oriented indeterminate impressions spaced about 2.0 mm apart.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 14

One rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles measuring up to 3.4 mm across. Tiny flecks of mica are visible in the paste. The exterior surface bears smoothed vertical cord roughening. The interior is smooth.

This vessel has an unassignable rim profile. The lip shape is expanding with a flat, 12.3 to 14.9 mm thick surface. The rim is 11.1 mm thick.

Shallow notches decorate the exterior lip edge. They are 4.6 mm wide and spaced 8.9 mm apart.

Vessel 15

Two conjoinable rim sherds represent this vessel.

The laminated and exfoliated paste contains a medium amount of sand and grit temper particles measuring up to 3.0 mm across. Tiny mica particles are also visible in the paste. The exterior surface has been smoothed obliterating the underlying surface treatment. The interior is smooth.

The rim profile is vertical. The lip shape is expanding with an interior flange. The lip is 13.0 mm thick, undecorated and heavily smoothed. The rim is 10.3 mm thick.

The only decoration on this vessel is right oblique CWT impressions that extend from the outer lip edge onto the rim. The CWT impressions are deeply impressed and 3.8 mm wide with 5 loops per centimetre.

Vessel 16

One rim sherd represents this vessel

The blocky and laminated paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 3.0 mm. The exterior finish is indeterminate, and the interior surface is smooth.

The rim profile is unassignable. The lip is 20.6 mm thick. The inner corner of the lip is exfoliated, but the exterior has been folded over onto the exterior of the 8.4 mm thick rim.

The lip surface has an uneven surface that is possibly fabric impressed, and the outer lip corner is decorated with small incisions, less than 4.5 mm long, oriented in a right oblique direction.

Vessel 17

Three rim sherds represent this vessel.

The laminated and friable paste contains a heavy quantity of grit temper particles ranging from 1.0 to 5.3 mm across. The exterior of the vessel bears vertical cord roughening. The interior of the vessel is smoothed but is still uneven with large temper particles protruding from the surface. There is a slight ridge of clay where some extra clay was flattened against the rim interior.

This vessel has a vertical rim profile, and the lip is square. The flat, 8.5 to 9.8 mm thick lip surface is undecorated. The rim is 7.7 mm thick.

The outer lip corner is decorated with notches that extend 8.4 mm onto the rim. These impressions are 3.5 mm wide and spaced about 8 mm apart. They may have been formed by pressing a fingernail into the clay.

Vessel 18

Ten sherds represent this vessel. Four have been reconstructed to form a portion of the vessel extending from the lip to the neck.

This vessel is thick with a blocky and somewhat laminated paste. The paste contains a sparse quantity of grit temper particles with one as large as 4.5 mm across. The exterior of the vessel bears lightly smoothed vertically oriented cord roughening. A thin encrustation of carbonized residue coats the interior.

This vessel has a vertical profile. The tapered lip surface is 6.6 mm thick. The rim thickens to 11.4 mm.

The rim is decorated with two horizontal rows of CWT impressions. These impressions are 2.7 mm wide, and there are six loops per centimetre. The rows are spaced 5.0 to 6.0 mm apart.

Vessel 19

Two rim sherds represent this vessel.

The paste texture is variable. One sherd is extremely laminated, and the interior and exterior surfaces are split apart while the other sherd is well consolidated. However, in all other respects they are identical. Both contain a medium amount of grit temper particles ranging in size from 1.0 to 5.0 mm across. The exterior surface treatment has been obliterated by smoothing, and the interior is smooth.

The rim profile is unassignable. The lip is expanding with an exterior flange. The flat, undecorated lip surface is 13.2 to 14.9 mm thick. The rim is 10.9 to 11.6 mm thick.

Short impressions, possibly fingernail impressions, are placed on the rim directly below the outer lip edge. The impressions are 9.0 mm long and spaced 11.6 to 15.0 mm apart.

Vessel 20

One rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 1.0 to 3.5 mm. The exterior surface bears fine, vertically oriented cord roughening, and an encrustation of carbonized residue coats the interior.

The vessel profile is unassignable, but the lip has an interior flange and flat surface. It is smooth, undecorated and 13.6 mm thick. The rim is 11.4 mm thick.

One 3.4 mm wide, right oblique CWT impression extends from the rim to the outer lip edge. The number of loops per centimetre cannot be determined. The vertical cord roughening begins 19 mm below the outer lip edge.

Vessel 21

One rim sherd represents this vessel.

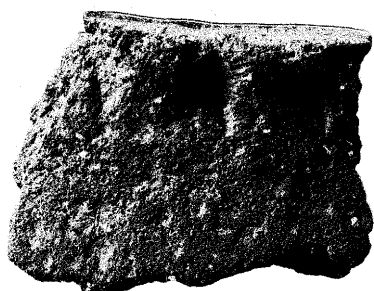
The blocky and exfoliated paste contains a medium amount of sand temper particles measuring less than 1.0 mm across. The exterior surface finish is obliterated by decoration, and most of the interior is exfoliated.

The rim profile is unassignable. The 6.2 mm thick lip surface is rounded and undecorated.

The rim is decorated with at least three horizontal rows of CWT impressions. The impressions are 3.2 mm wide with five loops per centimetre.



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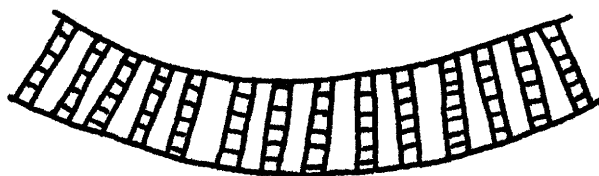
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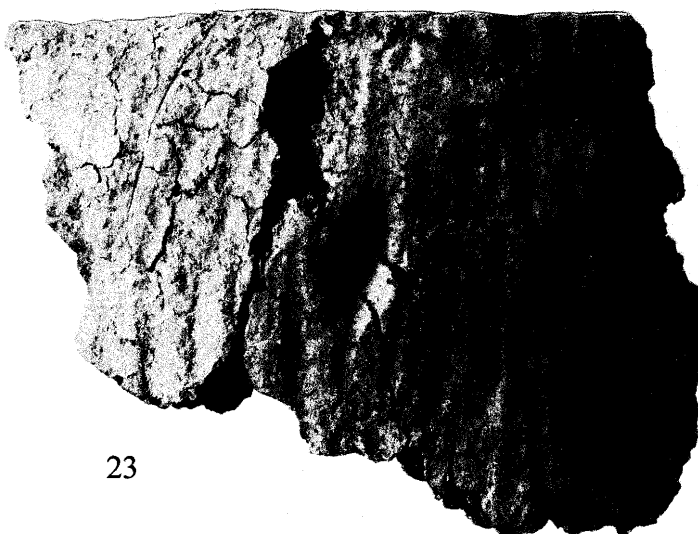
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Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 22

One rim sherd represents this vessel.

The blocky paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 2.7 mm. The exterior surface treatment of the vessel is indeterminate. The interior is smooth.

The rim profile is unassignable. The lip has a slight interior flange with a slightly rounded exterior. The lip surface is undecorated and 12.9 mm thick.

The exterior of the rim is decorated with faint, right oblique, CWT impressions extending from the outer corner of the lip onto the rim. Both are incomplete, so no measurements can be taken.

Vessel 23

This vessel is represented by six rim sherds and two near rim sherds. Two large rim sherds have been refitted to form a substantial portion of the rim.

The highly laminated and friable paste contains tiny flecks of mica and a heavy quantity of grit temper particles ranging in size from 0.5 to 2.5 mm. The exterior surface of the vessel exhibits vertical cord roughening that has been lightly smoothed. The interior is smooth with temper particles protruding through the surface.

The diameter of the vessel orifice is 14 cm. This vessel has a vertical rim and appears to represent a conoidal vessel. The 12.5 mm thick lip has an interior bevel and flat surface. The rim of the vessel is 11.1 mm thick.

Shallow, vertically oriented dentate impressions decorate the lip. These impressions are 2.4 mm wide with an average tooth length of 1.9 mm. The rows average 3.3 mm apart. The rim is decorated with shallow, oval stamps measuring 16.7 mm long and 7.1 mm wide. The two that are present on the reconstructed portion of the vessel are 18.3 mm apart. The stamps occur 22.5 to 23.6 mm below the lip. The interior of the vessel has slight bosses that were created by the exterior stamps.

Vessel 24

Three rim sherds, including two that are conjoinable, represent this vessel.

The slightly laminated and blocky paste contains tiny flecks of mica and a medium amount of grit temper particles ranging in size from 0.6 to 2.0 mm. The exterior surface of the vessel has been smoothed, obliterating the underlying surface treatment. Carbonized residue coats the lip and interior surface.

The vessel profile unassignable, but the lip has an interior flange and a flat, 12.3 to 12.6 mm thick surface. The rim is 12.3 mm thick.

Right oblique dentate impressions decorate the lip surface. These impressions are 1.0 mm wide with an average tooth length of 1.7 mm. The rows are spaced 2.4 to 3.6 mm apart. The largest rim sherd exhibits an impression that appears to have been made by pressing a finger into the rim. The fingernail indentation is visible. This decoration is placed 20.8 mm below the outer lip edge.

Vessel 25

One rim sherd represents this vessel.

The coarse, blocky, and exfoliated paste contains a medium amount of grit temper particles ranging in size from 0.5 to 2.6 mm. Smoothing obliterated the underlying surface treatment on the exterior surface. The interior is exfoliated.

The rim profile is unassignable. The 13.7 mm thick lip has a slight interior overhang. The lip surface is flat and undecorated. The rim is 11.8 mm thick.

On the outer lip edge is a small, 2.4 mm wide notch. A faint line is present on the rim 23.4 mm below the lip edge. This line is 3.3 mm wide and may have been formed when an object was dragged across the surface of the vessel.

Vessel 26

One rim sherd represents this vessel.

The slightly blocky paste contains a medium amount of grit temper particles ranging in size from 0.7 to 3.9 mm. The exterior of the vessel exhibits vertical cord roughening. Carbonized residue coats the smooth interior surface.

The rim profile is unassignable. The lip has an exterior bevel with a rounded surface 10.2 to 10.9 mm thick. The rim measures 6.6 mm at its thinnest point.

The lip surface is decorated with right oblique shallow CWT impressions. These impressions have been partially obscured by smoothing so no measurements can be taken. The inner lip edge is decorated with 4.0 to 4.4 mm wide shallow notches spaced 4.0 to 5.7 mm apart.

Vessel 27

One rim sherd represents this vessel.

The slightly laminated paste contains a sparse quantity of grit temper particles measuring about 1.3 mm across. The exterior surface treatment of the vessel is obliterated by smoothing. The interior is smooth.

The rim profile is unassignable. The 12.1 mm thick lip has an interior flange and a flat, undecorated surface. The rim is 7.9 mm thick.

The outer lip edge bears two notches spaced 7.9 mm apart. The complete notch is 2.4 mm wide. The inner lip edge exhibits a partial notch.

Vessel 28

Eight sherds represent this vessel. Five have been refitted to form an area extending from the lip to the neck/shoulder area.

The somewhat laminated paste contains a heavy quantity of grit temper particles with the majority measuring between 3.0 and 4.0 mm across. The exterior of the vessel bears heavily smoothed fabric impression. An encrustation of carbonized residue coats the interior.

The diameter of the vessel orifice is 20 cm. This vessel has a vertical rim profile and expanding lip with an interior flange. The lip thickness ranges from 13.8 to 15.3 mm, and the flat surface is smoothed. The rim of the vessel is about 8.5 mm thick. The neck is 11.4 mm at its thickest point and the vessel narrows to 6.5 mm at the thinnest point of the neck/shoulder.

The outer lip edge is decorated with notches made by impressing a BET into the clay. These notches are 4.5 mm wide and spaced 8.3 to 9.5 mm apart. The rim and neck

of this vessel are decorated with shallow incisions in a roughly checker board pattern. These lines were created by dragging an object very lightly across the exterior surface of the vessel.

Vessel 29

Two conjoinable rim sherds, representing an area extending from the lip to the shoulder, have been assigned to this vessel.

The blocky paste contains a sparse amount of sand and grit temper particles that range in size from barely visible up to 2.0 mm. The exterior of the vessel exhibits deeply impressed vertically oriented cord roughening. A heavy encrustation of carbonized residue coats the interior.

The rim profile is angled with the interior exhibiting a concave surface. The lip is 10.1 mm thick with a slight exterior bevel and flat surface. The rim is 9.6 mm thick, and the angled shoulder is 15.8 mm thick narrowing to 11.6 mm below the shoulder.

The lip surface is decorated with vertically oriented round edged tool impressions with some overlapping horizontal CWT impressions. The round edged tool impressions are 1.9 mm wide and spaced 3.3 to 4.6 mm apart. The top 10.0 mm of the rim is decorated with overlapping left oblique cord roughening.

Vessel 30

Five rim sherds, including two that are conjoinable, represent this vessel.

The paste is extremely laminated with some exfoliation on the vessel exterior. The paste contains tiny flecks of mica and a sparse amount of grit temper particles ranging in size from 0.6 to 2.0 mm across. The exterior of the rim has been smoothed, but a trace of vertically oriented cord roughening remains. Carbonized residue coats the interior.

The rim profile is unassignable. The slightly rounded lip ranges from 9.9 to 11.9 mm thick.

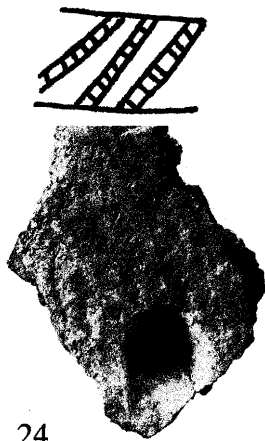
Traces of decoration are present on the lip surface and outer rim, but smoothing has made it impossible to determine the type of impression. The outer rim has been decorated with pinches creating a scalloped appearance around the rim. The spacing of these cannot be determined because there are no conjoinable sherds with more than one decorative element.

Vessel 31

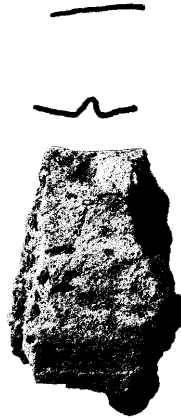
Four undecorated sherds have been refitted to form an area extending from the lip to the neck/shoulder.

The compact to slightly blocky paste contains a medium amount of grit temper particles ranging in size from 1.5 to 2.5 mm. The exterior of this vessel is fabric impressed, and an encrustation of carbonized residue coats the smooth interior.

The orifice diameter is 10 cm. The rim has an S-profile, and the 10.4 to 13.5 mm thick, rounded lip surface is smoothed. The neck thins to 7.5 mm. The neck/shoulder is 11.5 mm thick.



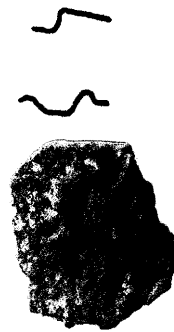
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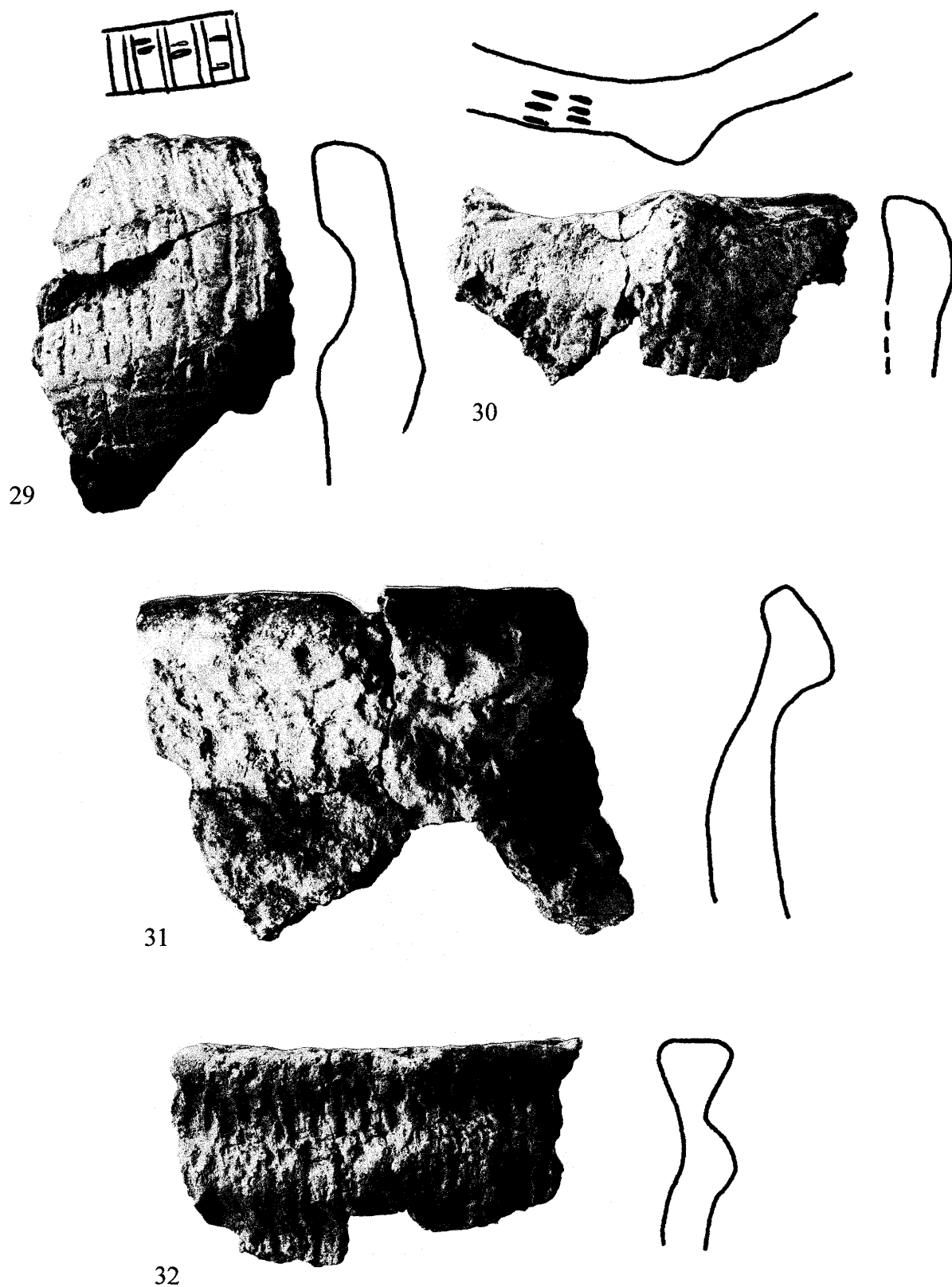
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Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 32

Eleven undecorated rim sherds represent this vessel. Several are conjoinable.

The compact paste contains a medium amount of grit temper particles measuring between 1.0 and 4.5 mm across. Tiny flecks of mica are also present in the paste. The exterior surface bears vertically oriented cord roughening that extends onto the lip surface. A thin encrustation of carbonized residue coats the interior.

The rim profile is unassignable. There is a concavity on the rim exterior giving it a wavy appearance. The 10.4 to 12.8 mm thick lip has an expanding shape and flat surface. The rim thins to 5.1 mm and is 8.1 mm thick at its thickest spot.

Vessel 33

Twelve sherds represent this vessel. Eleven have been reconstructed to form an area extending from the lip to the shoulder of the vessel.

Paste texture varies from compact in the rim to blocky in the shoulder area. It contains a medium amount of grit temper particles ranging in size from 1.0 to 6.7 mm across. The majority of the particles are about 1.0 mm across. The exterior surface bears coarse fabric impression that extends onto the lip surface. Light carbonized residue coats the vessel interior which exhibits slight impressions that may have been created by an anvil, such as a smooth stone, being held against it during the formation of the vessel.

The vessel orifice has a diameter of 11 cm. The vessel has a short, vertical rim and an expanding lip. The flat lip surface is 7.2 to 8.6 mm thick, and the neck thins to 6.3 to 6.5 mm. The shoulder of the vessel is rounded and 9.4 mm thick.

Vessel 34

Fifteen undecorated sherds represent this vessel, and an area extending from the lip to the neck has been reconstructed.

The compact paste contains a medium amount of sand and grit temper particles measuring up to 3.0 mm across. The exterior of the vessel bears vertically oriented cord roughening that has been lightly smoothed. The interior is smooth with fine horizontal striations.

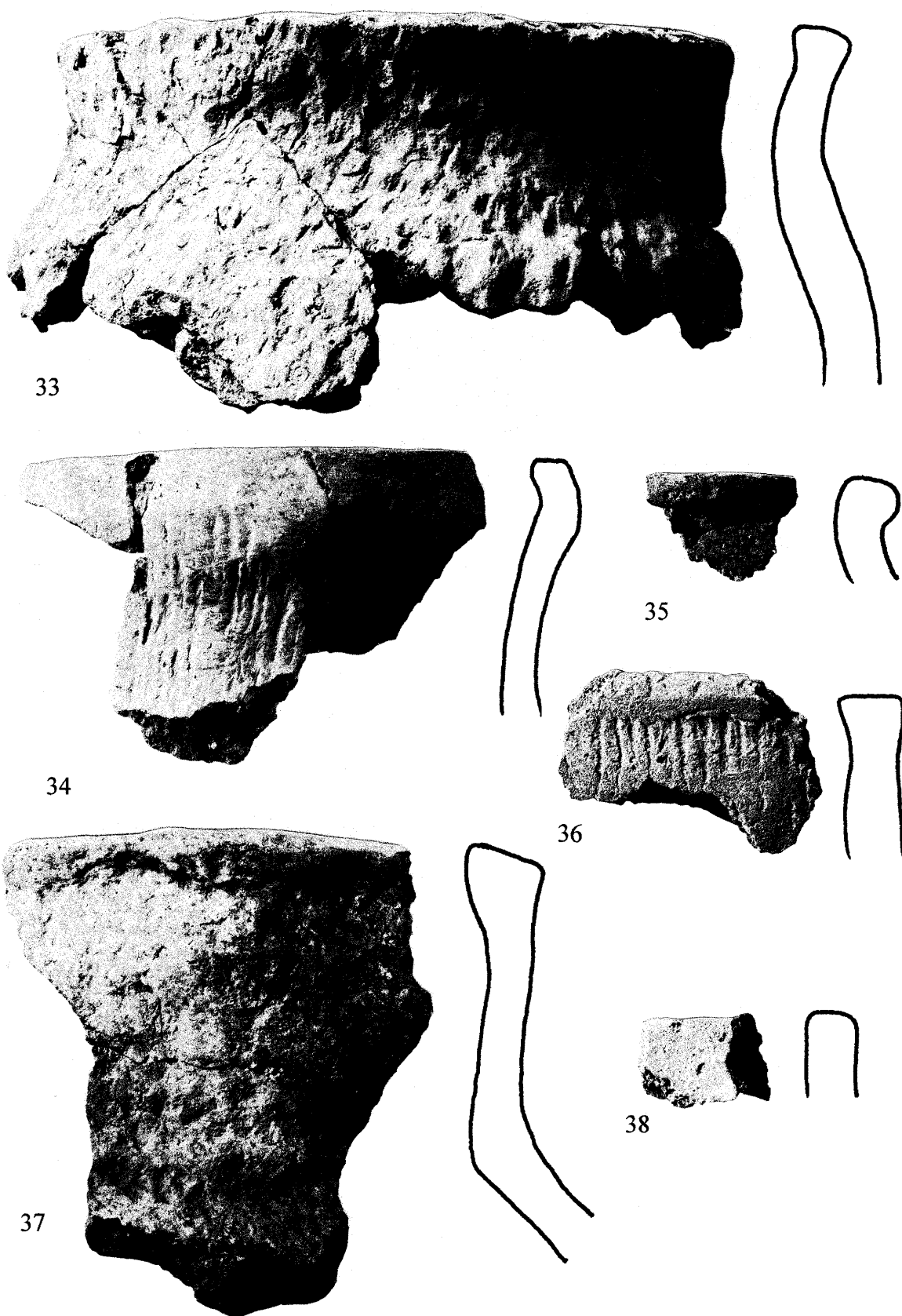
The orifice has a diameter of 12 cm. This vessel has an S rim profile. The flat 5.0 to 7.9 mm thick lip surface is smoothed. The distance between the lip and rim angle is 14.5 mm. This portion of the 5.3 mm thick rim is heavily smoothed.

Vessel 35

Two small, undecorated rim sherds represent to this vessel.

This highly laminated paste contains a medium quantity of sand and grit temper particles ranging in size from 0.6 to 5.3 mm. Tiny flecks of mica are present in the paste. The exterior and interior surfaces are smooth.

The rim profile is unassignable. The lip has a slight exterior flange, and the 8.7 to 9.8 mm thick lip is smoothed.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 36

One undecorated rim sherd represents this vessel.

The compact and homogeneous paste contains tiny flecks of mica and a medium amount of grit temper particles ranging in size from 1.4 to 2.5 mm. The exterior surface bears lightly smoothed vertical cord roughening that extends onto the lip surface. A thin encrustation of carbonized residue coats the interior.

The rim profile is unassignable. The lip has a square shape, and the flat surface is 9.9 to 10.9 mm thick. The rim is 9.6 mm thick.

Vessel 37

Eleven undecorated sherds represent this vessel. Two large sherds have been reconstructed to form an area extending from the lip to the neck/shoulder.

The compact paste contains tiny flecks of mica and a medium amount of grit temper particles ranging in size from 1.5 to 5.0 mm across. The exterior of the vessel bears lightly smoothed fabric impression that extends onto the lip surface. An encrustation of carbonized residue coats the interior.

This vessel has a vertical rim profile. The flat lip has an exterior bevel and is 12.2 to 14.6 mm thick. The rim is 8.2 to 9.0 mm thick, and the thickest portion of the neck is 9.9 mm thick. The neck/shoulder area is 10.35 mm thick.

Vessel 38

One undecorated rim represents this vessel.

The compact paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. The exterior has a smooth surface, and carbonized residue blackened the smooth interior.

The rim profile is unassignable. The flat, square lip is 8.7 mm thick.

Vessel 39

One small undecorated rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper. One particle measures 3.1 mm across. The exterior surface treatment is indeterminate. The interior is smooth.

This vessel has an unassignable rim profile. The lip has a "T" shaped profile. It is 9.2 mm thick. The rim thins to 4.7 mm.

Vessel 40

One small undecorated rim sherd represents this vessel.

This compact, dense sherd contains a medium amount of grit temper particles ranging in size from 0.8 to 3.0 mm. The top 16 mm of the rim exterior is smoothed to the point that the underlying surface treatment has been obliterated, but below that a trace of cord roughening is visible. The interior of the vessel has also been smoothed.

The rim profile is unassignable. The 5.9 to 6.4 mm thick square lip has a flat smooth surface. The rim is 6.2 mm thick.

Vessel 41

One undecorated rim sherd represents this vessel.

The compact and homogeneous paste contains a medium amount of sand and grit temper. The particles range from 0.5 to 2.5 mm, but most are very small. The exterior surface treatment is indeterminate. The smooth interior exhibits faint horizontal striations. A thin encrustation of carbonized residue coats the interior and exterior surfaces.

The rim profile is unassignable. The lip profile is expanding with a flat, smooth 8.4 mm thick lip surface. The rim is 6.3 mm thick.

Vessel 42

One undecorated rim sherd represents this vessel.

The blocky paste contains a heavy quantity of grit temper particles measuring between 1.0 and 6.3mm across. The exterior of the vessel exhibits cord roughening that extends onto the lip surface. The interior surface is uneven and has a depression that appears to be from a thumb being pressed against it.

The rim profile is vertical. The lip is 8.5 mm thick with a rounded profile and slight exterior flange. The rim is 7.7 mm thick.

Vessel 43

Two undecorated, conjoinable rim sherds represent this vessel.

The compact paste contains flecks of mica and a medium amount of grit temper particles measuring up to 2.2mm across. The exterior of the vessel exhibits vertical cord roughening that extends onto the lip surface. A thin encrustation of carbonized residue coats the interior.

The rim profile is unassignable. The 7.7 to 9.1 mm thick lip has an exterior bevel and flat surface.

Vessel 44

Two undecorated, non-conjoinable rim sherds represent this vessel.

The compact and homogeneous paste contains flecks of mica and a medium amount of fine grained grit temper particles measuring less than 2.0 mm. The exterior of the vessel bears fabric impression that extends onto the lip surface. A thin layer of carbonized residue coats the vessel interior.

The rim profile is unassignable. The lip profile is square with a 7.6 to 8.5 mm thick, flat lip surface. The rim is 6.3 mm thick.

Vessel 45

One undecorated rim sherd represents this vessel.

The compact paste contains tiny flecks of mica and a medium amount of grit temper particles measuring less than 1.5 mm across. The exterior surface treatment is indeterminate. A thin layer carbonized residue coats the interior surface.

The rim profile is unassignable. The flat lip is 9.3 to 10.2 mm thick and has an interior flange. The interior of the rim has a ridge of clay created by the interior lip flange.

Vessel 46

Four undecorated rim sherds, including two that are conjoinable, represent this vessel.

The compact paste contains a medium quantity of sand and grit temper particles measuring up to 2.1 mm across. The exterior of the vessel bears deeply impressed vertical cord roughening. The interior is smooth with tiny mica particles on the surface.

The vessel has a short, vertical rim with a slightly rounded lip profile. The lip surface is 6.7 to 9.1 mm thick. It is undecorated but has been smoothed. The rim is 7.0 mm.

Vessel 47

One small undecorated rim sherd represents this vessel.

The compact paste contains a medium quantity of grit temper particles ranging in size from 1.0 to 3.8 mm. The exterior of the vessel exhibits vertically oriented cord roughening that extends onto the lip surface. The interior is smooth.

The rim profile is unassignable, but the lip has an expanding shape with an exterior bevel. The lip is 9.9 mm thick, and the rim thins to 6.9 mm.

Vessel 48

One small undecorated rim sherd represents this vessel.

The compact paste contains tiny flecks of mica and a sparse quantity of grit temper particles measuring up to 1.7 mm across. The exterior surface treatment is indeterminate. A thin encrustation of carbonized residue coats the smooth interior.

The sherd is too small to assign a vessel profile, but the 6.6 mm thick lip has a square shape.

Vessel 49

One undecorated rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.3 to 3.2 mm. The exterior of the vessel is smooth. The interior is also smooth with a light coating of carbonized residue.

The rim profile is unassignable. The 6.0 mm thick lip has a square shape.

Vessel 50

One undecorated rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 1.0 to 2.5 mm. The exterior bears vertically oriented cord roughening and the interior is smooth with fine horizontal striations.

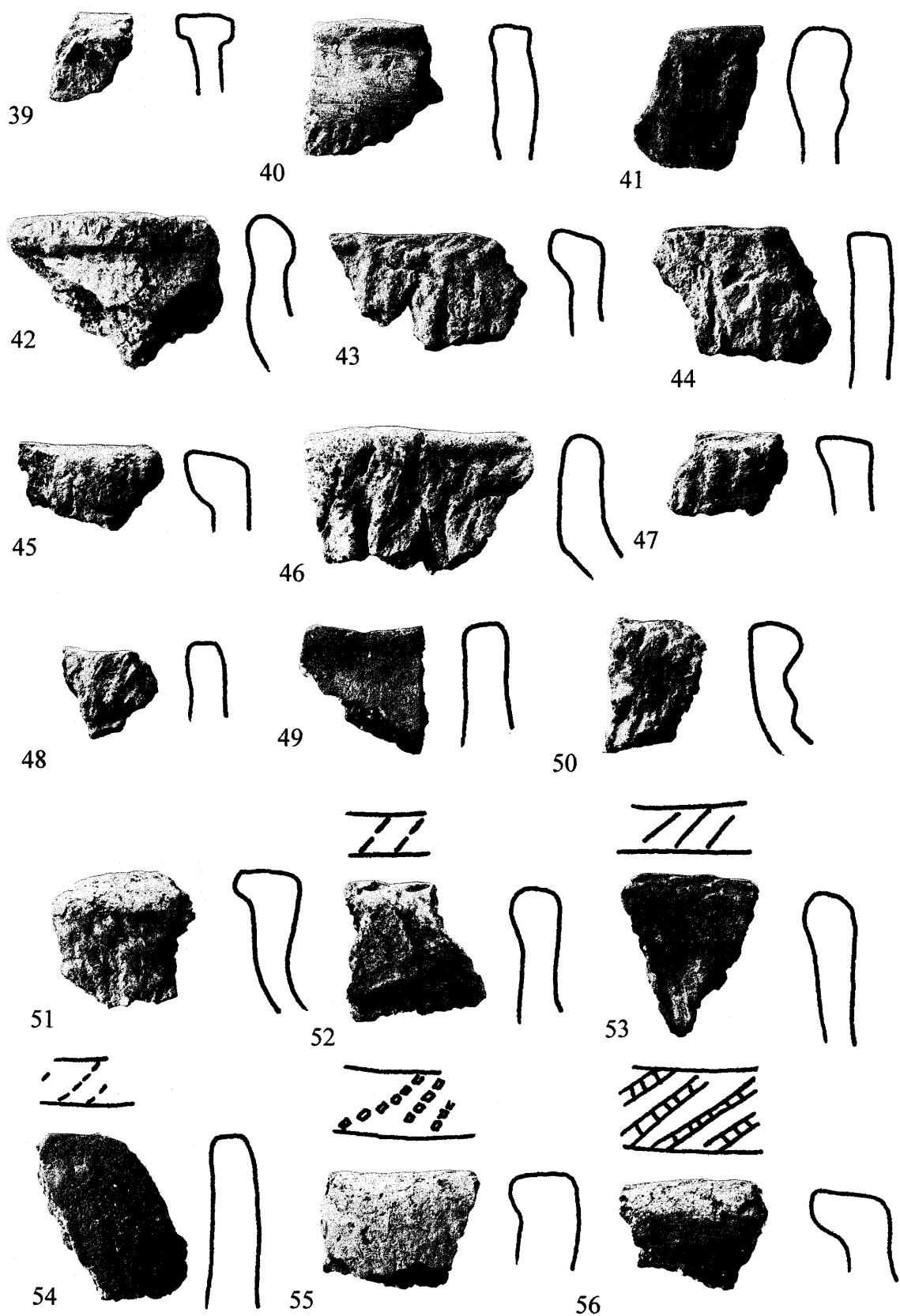
The vessel has a vertical, short rim with an expanding lip. The lip is 8.6 mm thick, and the neck is 5.4 mm thick. The lip surface is slightly exfoliated.

Vessel 51

One undecorated rim sherd represents this vessel.

The blocky paste contains tiny mica particles and a medium amount of grit temper particles ranging in size from 1.0 to 3.0 mm. The exterior surface bears fabric impressions that extends onto the lip surface. The interior is smooth.

This vessel has a short, vertical rim with an expanding lip. The lip is 11.7 mm thick, and the neck thins to 3.8 mm.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 52

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.1 to 2.2 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. A thin layer of carbonized residue coats the smooth interior.

The rim profile is unassignable. This sherd has a 7.9 mm thick, rounded lip. The rim is 7.0 mm thick.

The lip is decorated with right oblique dentate impressions that are 1.2 mm wide with an average tooth length of 4.4 mm.

Vessel 53

One rim sherd represents this vessel.

The compact paste contains a medium amount of sand and grit temper particles measuring up to 2.5 mm across. The exterior surface treatment has been obliterated, and a thin encrustation of carbonized residue coats the smooth interior.

The rim profile is unassignable. The 8.1 mm thick lip is rounded. The rim thins to 4.6 mm.

The lip surface is decorated with right oblique dentate impressions. These impressions are 1.5 mm wide with an average tooth length of 2.4 mm.

Vessel 54

One rim sherd represents this vessel.

The compact paste contains a heavy quantity of sand and grit temper particles measuring between 0.5 and 3.0 mm across. Smoothing obliterated the underlying surface treatment on the exterior surface. The interior is smooth with several horizontal striations.

The rim profile is unassignable. The vessel has a square, 7.9 mm thick lip. The rim is 8.1 mm thick.

The lip bears shallow dentate impressions oriented in a right oblique direction. The impressions are 1.0 mm thick with an average tooth length of 2.0 mm.

Vessel 55

One rim sherd represents this vessel.

The compact paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 3.4 mm. Smoothing obliterated the underlying surface treatment on the exterior surface. The interior is smooth.

The rim profile is unassignable. The lip has an interior flange, and the 11.4 mm thick lip has a flat surface. The rim is 10.0 mm thick.

The lip is decorated with shallow, right oblique dentate impressions that are 1.2 mm wide with an average tooth length of 1.4 mm.

Vessel 56

Four non-conjoinable rim sherds represent this vessel.

The blocky, exfoliated paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 4.0 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. The smooth interior is exfoliated in several areas.

The vessel has an unassignable rim profile. The lip is expanding with a 13.5 mm thick, flat lip surface. No decoration is present on the 6.8 mm thick rim.

The lip is decorated with right oblique dentate impressions. These impressions are 1.7 mm wide, and the average tooth length is 2.5 mm. The rows are spaced 3.5 to 4.5 mm apart.

Vessel 57

Two conjoinable rim sherds represent this vessel.

The blocky paste contains tiny flecks of mica and a medium quantity of grit temper particles ranging from 1.0 to 1.7 mm across. The exterior of the vessel bears smoothed vertical cord roughening. A thin encrustation of carbonized residue coats the smooth interior.

The rim profile is unassignable. The slightly tapered lip with a rounded surface ranges in thickness from 6.5 to 8.3 mm. The rim is 7.1 mm thick at 25 mm below the lip.

The lip surface bears right oblique dentate impressions. The impressions are 1.2 mm wide with an average tooth length of 3.7 mm, and the irregularly spaced rows are 1.0 to 4.4 mm apart.

Vessel 58

Two small, conjoinable rim sherds represent this vessel.

The paste is compact with a medium amount of grit temper particles ranging in size from 1.0 to 3.0 mm. The exterior surface treatment is obliterated. The interior surface is smooth.

These sherds have an unassignable rim profile. The 9.6 to 10.0 mm thick lip has an exterior bevel and a flat surface. The rim thins to 7.1 mm.

The lip is decorated with two deeply impressed (1.7 mm) rows of horizontally oriented dentates. The rows are 1.6 mm wide with an average tooth length of 2.3 mm.

Vessel 59

One small rim sherd represents this vessel.

The laminated paste contains a medium amount of grit temper particles measuring between 0.6 and 1.9 mm across. Smoothing obliterated the underlying surface treatment on the exterior of the vessel. The interior of the rim has been heavily smoothed and exhibits several horizontal striations.

The rim profile is unassignable. The 10.1 mm thick lip has an interior bevel. The rim is 7.8 mm thick.

The lip is decorated with shallow vertically oriented dentate impressions. The dentates are 2.7 mm square, and the rows are spaced about 2.5 mm apart.

Vessel 60

One rim sherd represents this vessel.

The compact paste contains tiny flecks of mica and a medium quantity of grit temper particles ranging in size from 0.3 to 3.4 mm. The exterior of the vessel exhibits vertically oriented simple stamped impressions that were probably formed by paddling the exterior surface with a grooved paddle. A thin layer of carbonized residue coats the smooth interior surface.

The vessel rim profile cannot be determined. The lip is rounded. The lip ranges from 7.4 to 8.4 mm thick, and the rim thins to 6.6 mm.

The lip surface is decorated with right oblique dentate impressions. The impressions are 1.3 mm wide with an average tooth length of 1.8 mm. The rows are spaced 2.8 to 3.6 mm apart.

Vessel 61

Twenty-nine sherds, including many that are conjoinable, represent this vessel. An area extending from the lip to the body has been reconstructed, and at least 45% of the rim circumference is present.

The compact paste contains a sparse quantity of fine particles of sand and grit temper particles measuring up to 2.5 mm across. The exterior of the vessel bears vertically oriented cord roughening. A thin encrustation of carbonized residue coats the smooth interior. Some areas of the neck interior have been burnished.

The diameter of the vessel orifice is 10 cm. The vessel has a short, vertical to slightly excurvate rim. The 7.6 to 9.3 mm thick expanding lip has a flat surface. The rim is 6.7 mm thick, and the neck thickens to 7.1 mm. The angled shoulder is 10.5 mm thick. The body thins to 4.8 mm.

Right oblique dentate impressions decorate the lip surface. These impressions are 1.2 mm wide with an average tooth length of 2.1 mm. The rows are 1.0 to 3.0 mm apart.

Vessel 62

Eight rim sherds, including five that are conjoinable, have been assigned to this vessel.

The compact paste contains tiny flecks of mica and a medium amount of sand and grit temper particles measuring less than 2.5 mm across. The exterior of the vessel bears check stamping that has been lightly smoothed. The check stamps average 4 mm square. The interior of the vessel is smooth with several striations.

This vessel has a vertical rim profile with an expanding lip. The flat lip surface is 11.2 to 12.6 mm thick. The compact rim thins to 6.5 mm.

The lip surface is decorated with annular punctates. The diameter of each punctate is 5.6 mm and range from 1.68 to 3.5 mm deep. They are situated around the circumference of the lip surface and are spaced 10.3 to 12.6 mm apart.

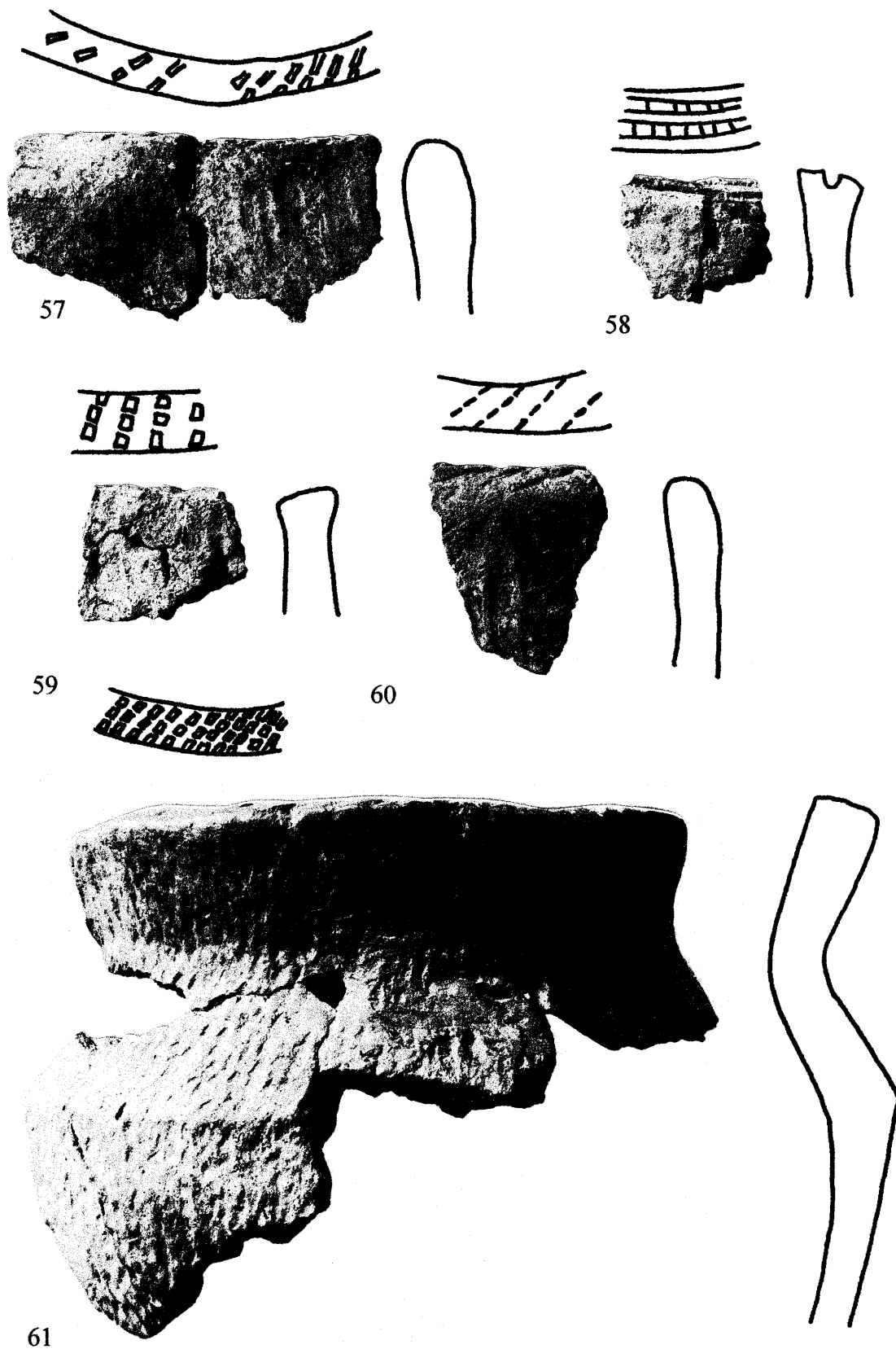
Vessel 63

Two rim sherds represent this vessel.

The slightly laminated paste contains a medium amount of grit temper particles ranging in size from 1.0 to 3.2 mm. The exterior of the vessel bears vertically oriented cord roughening that has been lightly smoothed. Temper particles protrude from the lightly smoothed interior surface.

The rim profile is unassignable, but the lip shape is rounded and slightly out flaring. Lip thickness ranges from 8.2 to 9.1 mm. The rim of the vessel is undecorated and is 5.6 mm thick at its thinnest point.

The lip is decorated with right oblique CWT impressions. These impressions are 5.2 mm wide with widely spaced loops. Each loop is about 2 mm apart.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 64

Two non-conjoinable rim sherds represent this vessel.

The blocky paste contains tiny flecks of mica and a medium amount of grit temper particles ranging in size from 0.9 to 3.7 mm. The exterior of the vessel exhibits vertical cord roughening, and an encrustation of carbonized residue coats the interior.

The rim profile is unassignable. The rounded lip is 9.2 mm thick. The rim is undecorated and 6.5 mm thick at its thinnest point.

The lip is decorated with fine, right oblique CWT impressions. Each impression is 2.3 mm wide with eight loops per centimetre.

Vessel 65

Two conjoinable rim sherds represent this vessel.

The paste is highly laminated, and the exterior and interior surfaces have split apart. The paste contains a sparse amount of grit temper particles measuring up to 3.1 mm across. Smoothing obliterated the underlying surface treatment on the vessel exterior. The interior is smooth.

The rim profile is unassignable, and the lip has a square shape. The flat lip surface is 8.5 mm thick.

The lip is decorated with right oblique CWT impressions. These impressions have been obscured by smoothing and measurements cannot be taken.

Vessel 66

Five rim sherds, including two that are conjoinable, represent this vessel.

The compact paste contains tiny flecks of mica and a sparse quantity of grit temper particles with an average size of 1.5 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. An encrustation of carbonized residue coats the smooth interior.

This vessel has a vertical rim profile, and the lip exhibits an exterior bevel. The flat lip surface is 6.2 to 7.6 mm thick. The rim is undecorated and ranges in thickness from 6.3 to 7.1 mm. The 8.5 mm thick neck area is also undecorated.

The lip is decorated with right oblique CWT impressions that have been smoothed. The impressions are about 4.8 mm wide with 4 to 5 loops per centimetre.

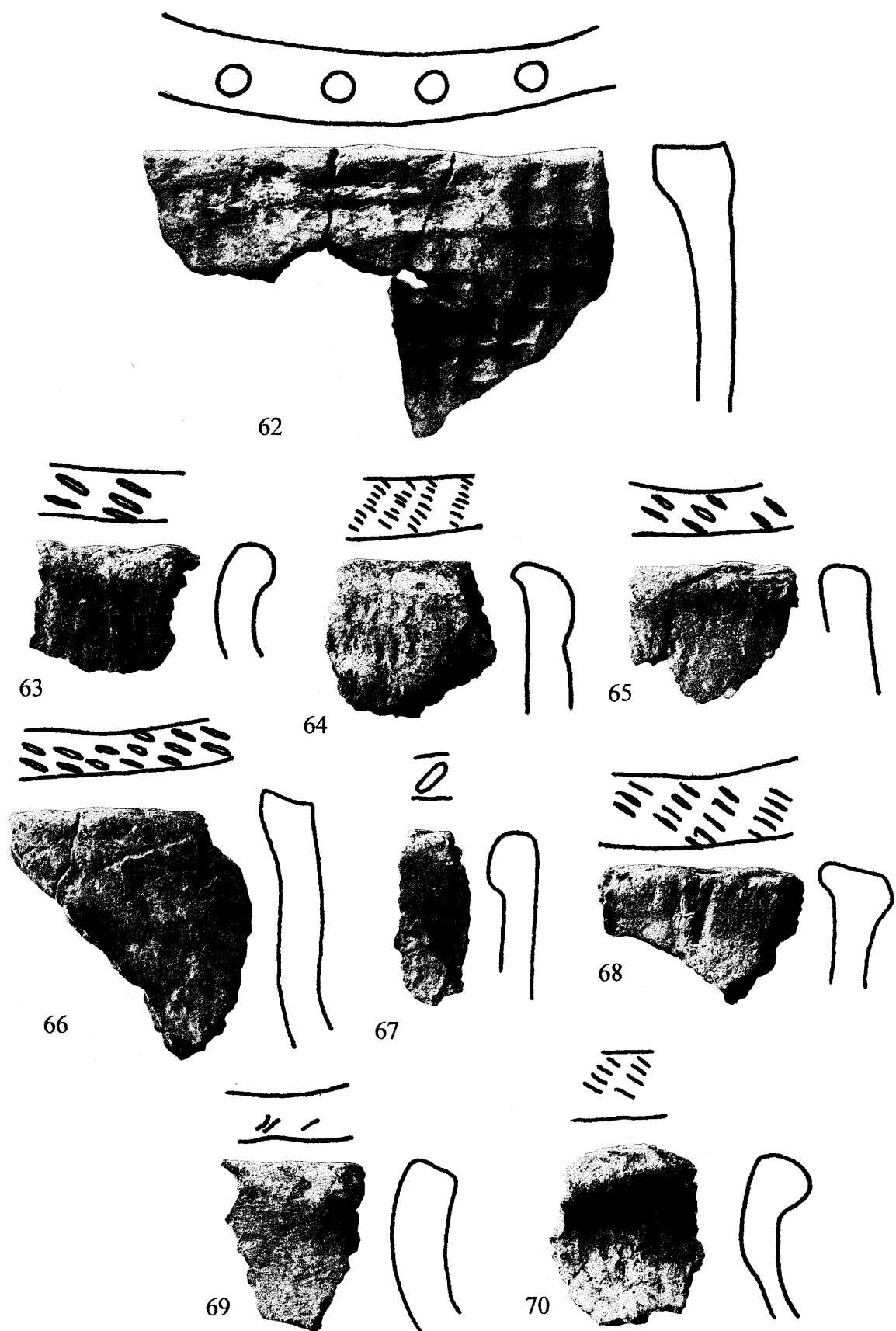
Vessel 67

One rim sherd represents this vessel.

The compact paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 3.6 mm. The exterior of the vessel is burnished with one exfoliated area. The interior is smooth.

The rim profile is unassignable. The 8.5 mm thick lip has an interior overhang and a rounded lip surface. The rim is undecorated and thins to 6.1 mm.

The lip is decorated with a 1.9 mm wide round edged tool impression oriented in a right oblique direction.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 68

Three rim sherds represent this vessel.

The compact paste contains tiny flecks of mica and a medium amount of grit temper particles ranging in size from 1.0 to 3.1 mm across. The exterior surface bears smoothed vertically oriented cord roughening. The interior is smooth.

Not enough of the rim is present to determine the rim profile. The 10.3 to 12.9 mm thick lip is expanding with an interior flange. The undecorated rim thins to 6.2 mm.

The lip is decorated with right oblique CWT impressions. The impressions are about 5.1 mm wide with 5 to 6 loops per centimetre.

Vessel 69

One rim sherd represents this vessel.

The compact paste contains sparse grit temper. One particle measures 5.4 mm across. The exterior and interior of the vessel are smoothed.

This vessel has a short, vertical rim profile. The 8.6 to 9.3 mm thick lip has a square profile and has been smoothed. The rim/neck area is about 8.2 mm thick.

There is a trace of what appears to be a CWT impression on the lip surface.

Vessel 70

Three non-conjoinable sherds represent this vessel. An area extending from the lip to the neck/shoulder is represented.

The compact paste contains a sparse amount of sand temper particles measuring less than 1.0 mm across. The underlying exterior surface treatment has been obliterated by smoothing. The interior is rough.

The sherd has a short, excurved rim, and the lip has an expanding profile. The 10.6 mm thick lip surface is rounded. The neck is 6.9 mm thick, and the neck/shoulder area is 4.1 mm thick.

The lip is decorated with left oblique CWT impressions. The impressions are 4.8 mm wide with 5 loops per centimetre.

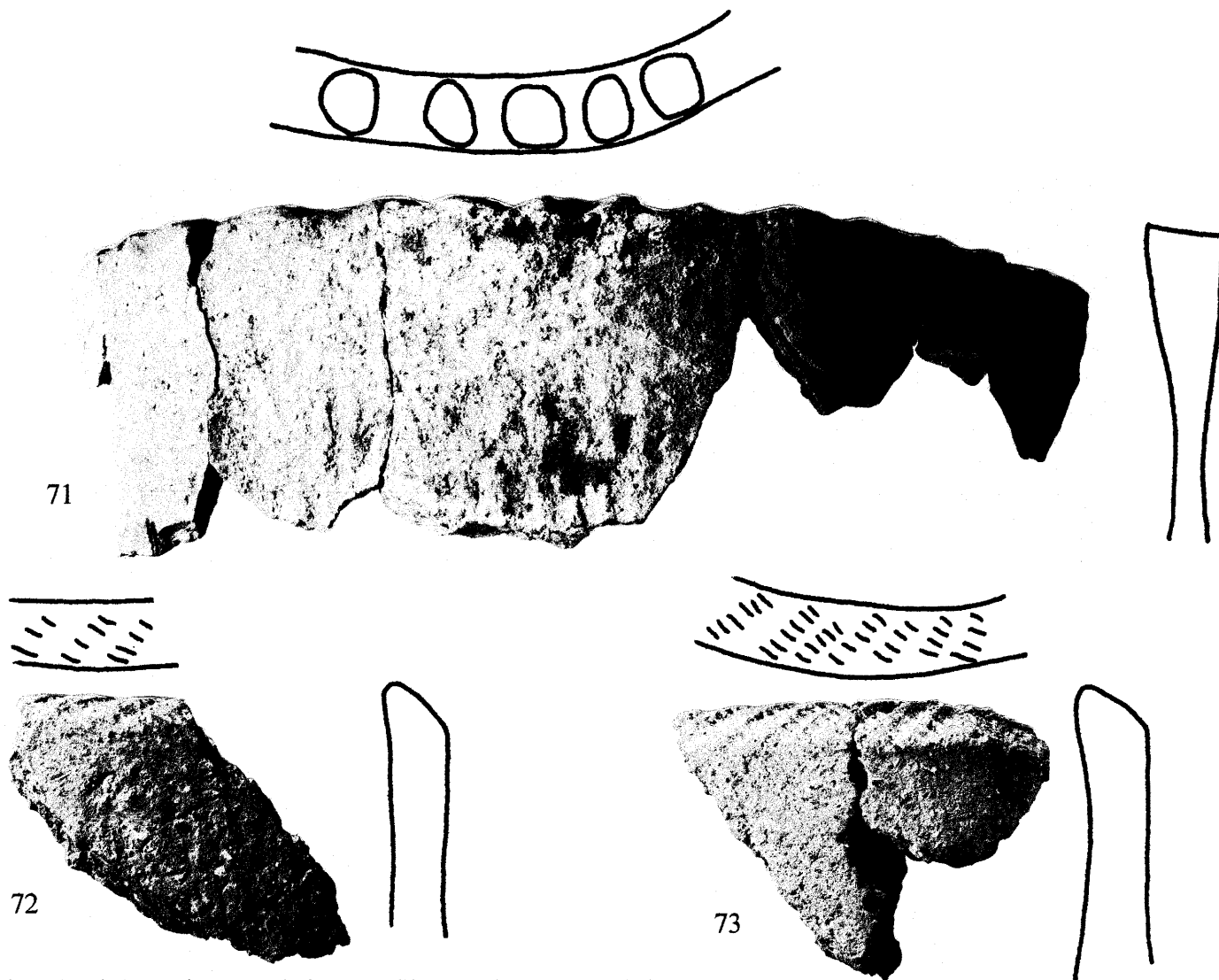
Vessel 71

Twelve rim sherds represent this vessel. Eight have been refitted, and about 40% of the rim is present.

The compact to blocky paste contains a medium amount of grit temper particles ranging in size from 1.0 to 5.6 mm. The exterior of the vessel bears vertically oriented cord roughening that has been smoothed. A thin encrustation of carbonized residue coats the smooth interior.

The orifice has a diameter of 16 cm. This vessel has a vertical rim profile and an expanding lip. The flat lip surface is 11.5 to 13.8 mm thick. The compact rim thins to 4.5 mm.

The lip surface is decorated with finger pinches. No other decoration is present on the vessel.



Appendix C: Miry Creek Vessels (actual size, profile exteriors to the right).

Vessel 72

Three rim sherds, including two that are conjoinable, represent this vessel.

The slightly laminated paste contains flecks of mica and a medium amount of grit temper particles ranging in size from 1.0 to 3.5 mm. The exterior of the vessel bears lightly smoothed vertically oriented cord roughening. A thin encrustation of carbonized residue coats the interior.

This vessel has an unassignable rim profile, and the lip has an exterior bevel. The flat lip surface is 9.8 to 10.1 mm thick. The rim is 9.9 mm thick.

The lip is decorated with right oblique CWT impressions. These impressions are 2.9 mm wide with 6 loops per centimetre.

Vessel 73

Two conjoinable sherds represent this vessel.

The blocky and slightly laminated paste contains a medium quantity of grit temper particles ranging from 1.0 to 2.5 mm across. Smoothing obliterated the underlying surface treatment on the vessel exterior. An encrustation of carbonized residue coats the smooth interior.

This vessel has an unassignable rim profile and the 10.5 to 11.9 mm thick lip has an exterior bevel. The rim is 10.1 mm thick.

The lip surface is decorated with right oblique CWT impressions. These impressions are 2.5 mm wide with 6 loops per centimetre.

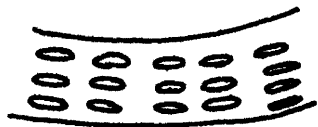
Vessel 74

Eight sherds have been reconstructed to form a portion of the vessel extending from the lip to the shoulder. Approximately 25% of the rim is present.

The compact paste contains a sparse amount of grit temper particles measuring 2.0 to 3.3 mm across. There are also tiny mica particles on the interior and exterior surfaces of the vessel. The exterior and interior of the vessel are smooth obliterating any underlying surface treatment.

The vessel orifice has a 16 cm diameter. The vessel has an excurvate rim, and the 10.5 to 11.9 mm thick lip is slightly rounded. The neck is 8.0 to 9.3 mm thick. The shoulder has a gentle angle and is 10.9 mm thick. The vessel wall thins to 8.0 mm below the shoulder.

The lip surface is decorated with large CWT impressions. They are 4.9 mm wide with four loops per centimetre. The impressions are oriented vertically and range from 2.4 to 4.6 mm apart.



74

Appendix C: Miry Creek Vessel (actual size, profile exteriors to the right).

Vessel 75

Forty sherds have been assigned to this vessel. It is the most complete vessel recovered from the Miry Creek site, and an area extending from the lip to the base has been reconstructed. About 50% of the rim pieces are present.

The compact paste contains a medium amount of sand and grit temper particles ranging in size from barely visible up to 3.5 mm across. The exterior of the vessel exhibits deeply impressed vertically oriented cord roughening. This is present on the entire exterior surface of the vessel although the orientation changes at the base where the impressions overlap.

A thick encrustation of carbonized residue coats the vessel interior and lip surface. The interior of the vessel is somewhat uneven with impressions that appear to have been created when an anvil, such as a smooth stone, was held against the interior of the vessel during its formation.

This is a globular vessel with a vertical rim profile and slightly expanding, flat lip. The shoulder is rounded, and the vessel has a rounded base. The vessel orifice has a diameter of 14 cm. The lip thickness ranges from 10.0 to 13.4 mm. The rim is 9.4 to 10.0 mm thick, and the neck is 8.7 to 9.1 mm thick. The shoulder is 8.9 mm thick, and the body thickness ranges from 5.6 to 10.2 mm. The base is the thickest portion of the vessel with one sherd measuring 13.7 mm thick.

Decoration is restricted to the lip surface which bears right oblique CWT impressions. These impressions are 2.9 mm wide with four to five loops per centimetre.

This vessel was selected for radiocarbon dating. Carbonized residue from the vessel interior yielded a date of 220 ± 40 (Beta-166750).

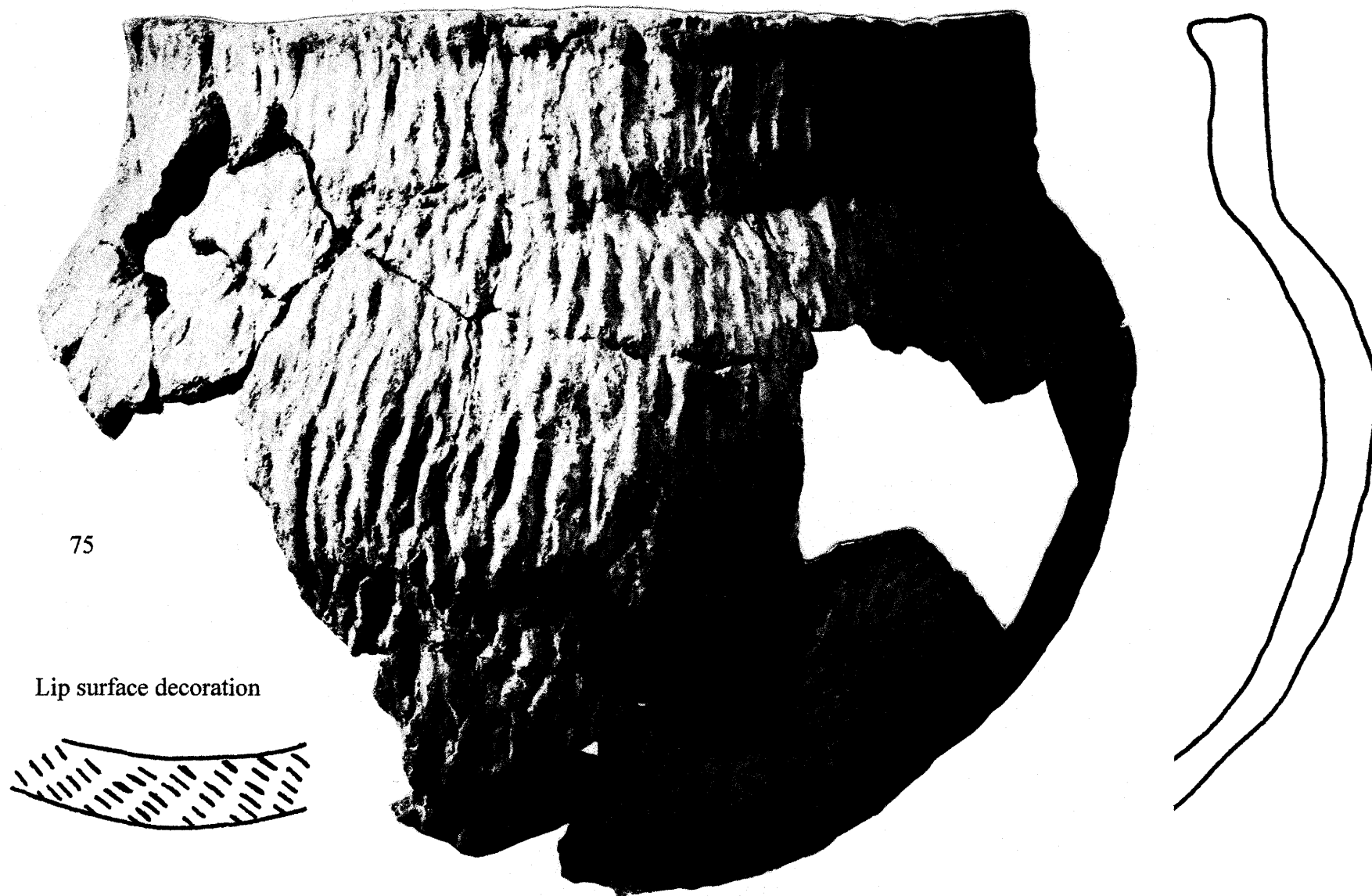
Vessel 76

This vessel is represented by six rim sherds, including five that have been refitted to reconstruct about 45% of the rim and neck.

The diameter of the vessel orifice is 9 cm. The paste texture is somewhat variable. Some portions of the neck and rim are compact while others are quite laminated. The interior of two sherds are exfoliated. The paste contains a heavy quantity of sand and grit temper particles ranging in size from 0.3 to 6.9 mm. Smoothing obliterated the underlying surface treatment on the vessel exterior. The interior of the vessel is quite smooth, but there are several uneven areas near the lip.

This vessel has a short, excurvate rim. The 7.0 to 8.4 mm thick lip has an exterior flange and flat surface. The rim and neck have an average thickness of 8.0 mm.

Notches decorate the outer lip edge. These were created by impressing a smooth, round edged object into the clay. These impressions are about 2.5 mm wide by 6.0 mm long and spaced between 3.1 and 5.4 mm apart.



Appendix C: Miry Creek Vessel (actual size, profile exterior to the right).

Vessel 77

Ten sherds represent this vessel. Seven have been reconstructed to form an area extending from the lip to shoulder. About 65% of the rim is present.

The paste is compact in the rim/neck area but somewhat laminated in the shoulder area. The paste contains a medium quantity of grit temper particles ranging in size from 0.8 to 8.7 mm. The exterior of the vessel has been smoothed to the point where the underlying vertical cord roughening is nearly obliterated except right below the punctates. Carbonized residue coats the interior and exterior surfaces. The interior exhibits shallow depressions that were probably created by an anvil stone held against the interior during the formation of the vessel.

The orifice diameter is 16 cm. The vessel has a short, vertical rim. The lip has an exterior flange, and the 10.7 to 12.0 mm thick lip surface is flat. The rim is 8.0 mm thick. The undecorated shoulder is 9.5 mm thick and has a gentle slope.

There is no decoration on the burnished lip surface. The rim is decorated with a row of annular punctates approximately 3.8 mm below the lip. These punctates are 2.6 mm wide and 1.3 to 2.8 mm deep. They are spaced between 3.8 and 7.0 mm apart.

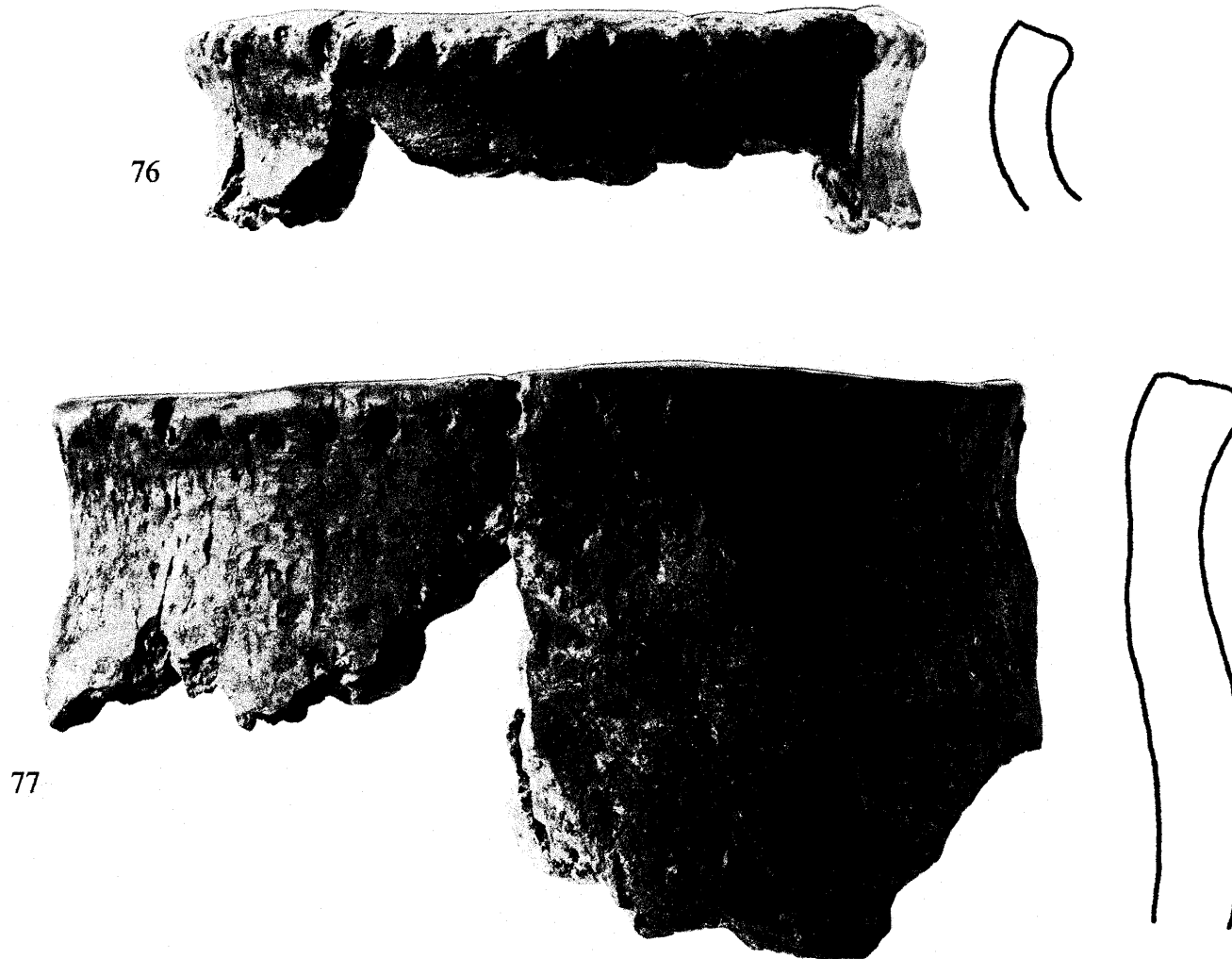
Vessel 78

Eleven sherds represent this vessel. Five have been refitted reconstructing an area extending from the lip to the neck.

The paste is highly laminated with many split sherds and contains a medium quantity of grit and sand temper. The particles range from 0.3 to 3.0 mm in size, but the majority of the particles are sand sized. The exterior surface of the vessel has been heavily smoothed, but a trace of check stamping remains on the neck area. The vessel interior is extremely smooth with slight depressions that may have been created by a finger or anvil such as a small stone.

The vessel orifice has a diameter of 21 to 22 cm. This vessel has a wedge rim profile, and the wedged shaped lip has a flat surface. It is 3.5 mm thick, smoothed and undecorated. The distance between the lip and rim angle is 17.4 mm. The thickest area of the rim is the angle which is 8.9 mm thick. The neck of the vessel is 8.6 mm thick.

The area above the rim angle is decorated with right oblique dentate impressions. These impressions are 1.6 mm wide with an average tooth length of 1.8 mm, and the rows are 1.9 to 3.3 mm apart. Directly below the dentate impressions are shallow indentations that appear to have been formed by pressing a finger lightly into the vessel. The three impressions, two of which are incomplete, on the reconstructed portion of the vessel are 20 to 25 mm apart.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 79

Four rim sherds represent this vessel.

The slightly laminated paste contains a heavy quantity of grit temper particles ranging in size from 1.5 to 3.5 mm. Tiny flecks of mica are also visible in the paste. Smoothing of the exterior obliterated the underlying surface treatment. A thin encrustation of carbonized residue coats the interior.

This vessel has a wedge rim profile, and the flat lip surface is 4.4 mm thick. The distance between the lip and rim angle is 15.6 mm. The area below the rim angle thins to 6.9 mm.

The area above the rim angle is decorated with right oblique dentate impressions. These impressions are 1.8 mm wide with an average tooth length of 1.3 mm. The area below the rim angle is decorated with teardrop shaped stamps. The stamps are 5.6 mm wide, 11.3 mm long and spaced 6.8 to 7.6 mm apart. The interior of the rim exhibits slight bosses from the exterior stamps.

Vessel 80

Nine rim sherds represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.5 to 4.5 mm. Tiny flecks of mica are visible in the paste. The exterior of the vessel has been heavily smoothed, but traces of check stamping remain. A heavy encrustation of carbonized residue coats the smooth interior.

This vessel has an angled rim profile. The 5.8 to 7.6 mm thick lip is slightly tapered with a smooth, rounded surface. The rim thickness ranges from 6.1 to 8.1 mm.

The rim is decorated with right oblique dentate impressions that extend 23 mm below the lip. The dentates are 1.9 mm wide with an average tooth length of 2.2 mm. Directly below the dentate impressions are shallow impressions that were probably made by pressing a fingertip into the vessel. These are spaced 10.6 to 15.4 mm apart.

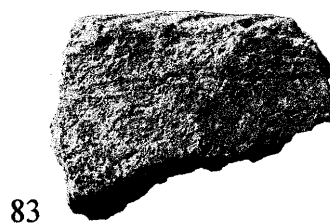
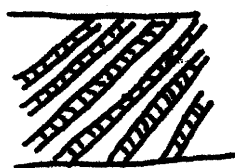
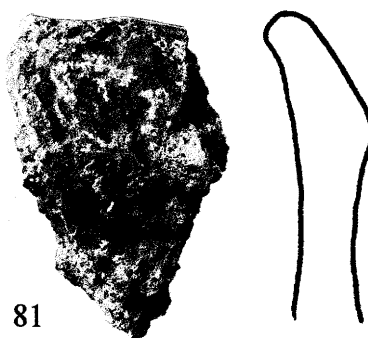
Vessel 81

One rim sherd represents this vessel.

The blocky paste contains a sparse quantity of grit temper with one particle measuring 3.6 mm across. The exterior surface finish is indeterminate, and a thin encrustation of carbonized residue coats the smooth interior.

This vessel has a wedge rim profile. The distance between the lip and rim angle is 19.3 mm. The flat undecorated lip is 6.3 mm thick.

The area above the rim angle is decorated with dentate impressions oriented in a left oblique direction. These impressions are 0.7 mm wide with an average tooth length of 3.1 mm. The area below the rim angle thins to 8.5 mm and is decorated with horizontal CWT impressions. The impressions are 4.0 mm wide with three loops per centimetre.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 82

One rim sherd represents this vessel.

The laminated and exfoliated paste contains a medium quantity of sand and grit temper particles with a maximum size of 3.5 mm. The exterior surface treatment is indeterminate. Most of the interior of the sherd is exfoliated.

The rim profile is unassignable. The lip profile is square with a 5.9 mm thick, flat lip surface.

The rim is decorated with left oblique dentate impressions. These are 1.7 mm wide with an average tooth length of 4.4 mm. The rows are spaced 4.1 mm apart.

Vessel 83

One rim sherd represents this vessel.

The compact paste contains a sparse quantity of grit temper particles ranging in size from 0.7 to 2.7 mm. Tiny flecks of mica are visible on the exterior and interior surfaces of the vessel. The exterior of the vessel has been smoothed leaving several horizontal striations. The underlying surface treatment has been obliterated. The interior of the vessel is smooth.

This angled rim profile is the only one of its kind at this site, with the rim bending at a near 90° angle. The lip surface is 5.3 mm thick, undecorated and smoothed. The rim is 5.4 mm thick.

The surface above the rim angle has been decorated with right oblique dentate impressions. The impressions are about 1.7 mm wide with an average tooth length of 1.6 mm. Rows are spaced 1.8 to 3.0 mm apart. The distance from the lip to rim angle is 17.6 mm.

Vessel 84

Three non-conjoinable rim sherds represent this vessel.

The blocky paste contains tiny flecks of mica and a medium amount of sand and grit temper particles measuring between 0.5 and 3.3 mm across. The exterior surface finish is indeterminate, and the interior is smooth.

This vessel has a wedge rim profile and the flat, undecorated lip surface is 5.6 to 6.4 mm thick. The distance between the lip and rim angle is 17.6 mm.

The area above the rim angle is decorated with left oblique dentate impressions. They are 0.9 mm wide with an average tooth length of 3.7 mm. The rows are spaced 6.9 mm apart.

Vessel 85

Four sherds, including three that have been refitted, represent this vessel. An area extending from the lip to the neck/shoulder of the vessel is reconstructed.

The compact paste contains a medium amount of sand temper particles measuring up to 2.1 mm across. Tiny flecks of mica are also visible. Smoothing obliterated the underlying surface treatment on the vessel exterior. The interior has several slight impressions that appear to have been made when a finger or anvil, such as a smooth stone, was held against the interior during the formation of the vessel.

The vessel orifice has a diameter of 11 cm. This vessel has an S-rim profile with an extreme concavity on the rim of the vessel interior. The rounded lip is 6.6 to 8.3 mm

thick and undecorated. The rim is 8.2 to 9.6 mm thick 25 mm below the lip edge. The neck of the vessel is undecorated and 8.0 mm thick.

The rim is decorated with two horizontal rows of CWT impressions that are 2.7 mm wide with four to five loops per centimetre. Directly below these, on the most convex portion of the rim, is a single row of fingernail impressions. These are spaced 6.7 to 7.9 mm apart.

Vessel 86

Two rim sherds represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.4 to 5.0 mm. The exterior of the vessel bears check stamping that has been heavily smoothed. An encrustation of carbonized residue coats the smooth interior.

This vessel has a wedge rim profile, and the flat lip surface is 4.0 mm thick. The distance between the lip and rim angle is about 12.2 mm, and this area bears smoothed check stamping. The thinnest portion of the rim is 5.6 mm thick.

Directly below the rim angle are 10.4 mm long, vertically oriented fingernail impressions spaced about 8.4 mm apart. Below these is a boss that was created by pressing a cylindrical object into the interior of the vessel. The boss diameter is 11.3 mm and is placed 21 mm below the rim angle. The area above the rim angle also exhibits a faint red stain. This is probably an indication that ochre was applied to this vessel.

Vessel 87

One rim sherd represents this vessel.

This compact paste contains tiny flecks of mica and sparse grit temper particles ranging from 1.0 to 2.3 mm across. The exterior of the vessel exhibits fabric impressions that extend onto the lip of the vessel. The interior of the rim is smooth.

The rim profile is unassignable. The lip profile is expanding, and the 10.3 mm thick lip is undecorated. The rim thins to 6.9 mm.

The rim is decorated with 3.7 mm deep punctates. Two partial punctates are present on this sherd. They are spaced 8.7 mm apart and placed 6.4 mm below the lip.

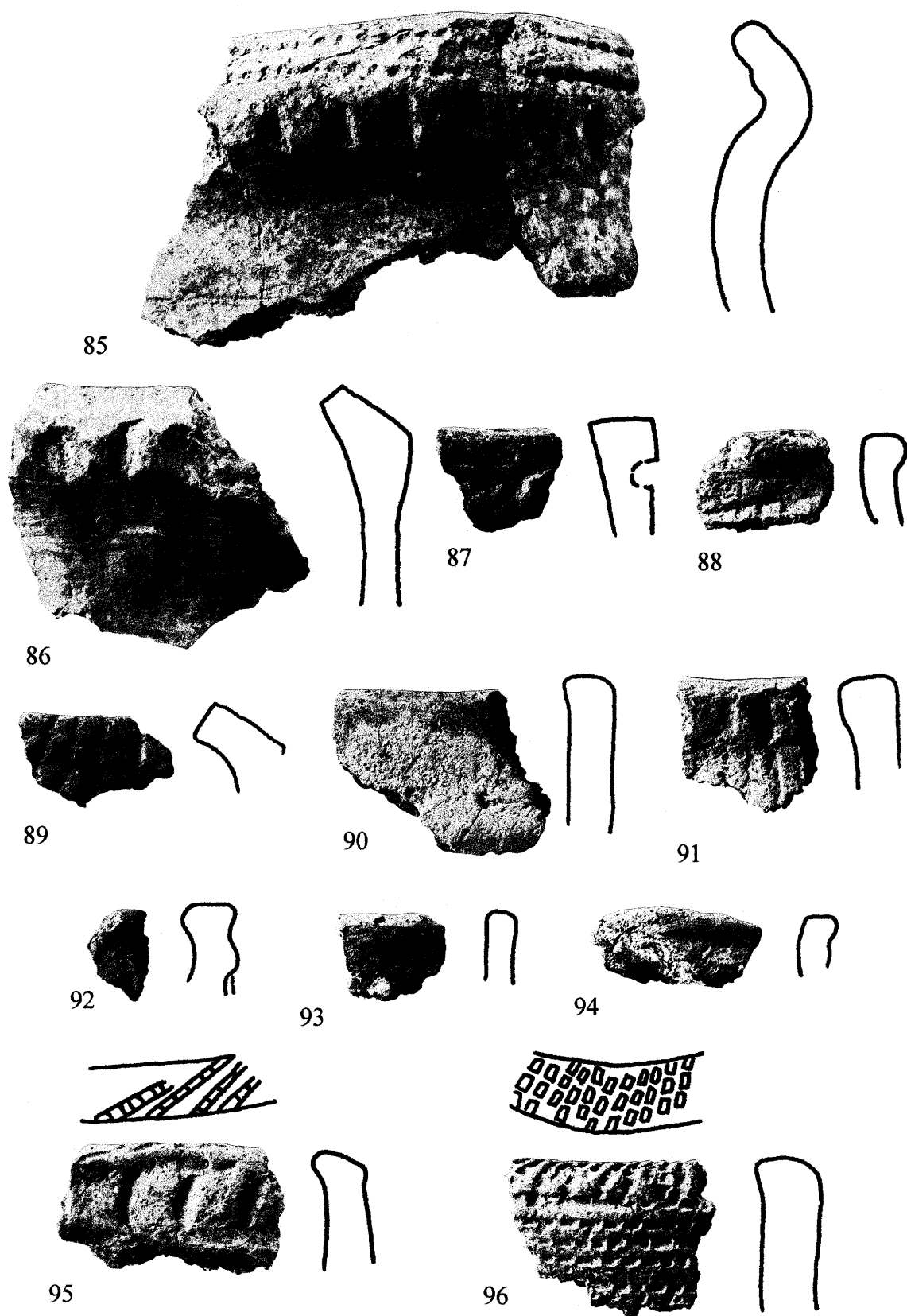
Vessel 88

Three rim sherds, including two that are conjoinable, represent this vessel.

The laminated and porous paste contains a heavy quantity of grit temper particles ranging in size from 0.7 to 4.2 mm. The exterior surface finish is indeterminate, and the interior is smooth.

The rim profile is unassignable. The 8.6 mm thick lip has an exterior flange, and the lip surface is rounded and undecorated. The rim thins to 4.4 mm.

The outer rim is decorated with at least two horizontal rows of CWT impressions that have been heavily smoothed. On several areas they are nearly obliterated and measurements cannot be taken.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 89

One small rim sherd represents this vessel.

The blocky paste contains a medium amount of grit temper particles ranging in size from 1.3 to 4.6 mm. Decoration has obliterated the underlying surface treatment. A thin encrustation of carbonized residue coats the smooth interior.

This vessel has a wedge rim profile, but only the area above the rim angle is represented. The 7.4 mm thick burnished lip surface is flat and undecorated.

The area above the rim angle is decorated with right oblique impressions that have been obscured by smoothing. The type of tool used to make these impressions cannot be determined, but they are 1.1 mm wide and spaced 3.3 to 5.7 mm apart.

Vessel 90

One rim sherd represents this vessel.

The compact paste contains a medium amount of sand and grit temper particles ranging in size from 0.5 to 5.5 mm. The exterior and interior of the vessel are smooth.

The rim profile is unassignable. The square lip is 8.9 mm thick, and the rim is 8.3 mm thick.

Two shallow, circular stamps are present on the rim 14.5 mm below the lip edge. They have a diameter of 3.9 mm and are spaced 7.5 mm apart.

Vessel 91

One rim sherd represents this vessel.

The slightly laminated paste contains a heavy quantity of sand temper particles measuring less than 1.4 mm across. The exterior surface exhibits vertical cord roughening. The interior is uneven with fine hairline cracks on the surface.

The rim profile of this vessel is unassignable. The lip has a square profile. The flat, 10.4 mm thick lip is undecorated.

The rim is decorated with an oval stamp directly below the lip. It is 3.1 mm wide and 6.7 mm long.

Vessel 92

One tiny rim sherd represents this vessel.

The compact and homogeneous paste contains a medium amount of sand temper particles measuring less than 1.0 mm across. The exterior surface treatment is indeterminate, and the interior is smooth.

The rim and lip profiles are unassignable. The 8.9 mm thick lip surface is smooth.

The rim bears a trace of a small indeterminate impression.

Vessel 93

One tiny rim sherd represents this vessel.

The compact and homogeneous paste contains a medium quantity of sand and grit temper particles measuring up to 3.5 mm across. The exterior of the rim is smooth.

The rim profile is unassignable. The 6.0 to 6.6 mm thick lip surface is rounded.

A shallow finger impression is visible on the exterior of the rim, but it is impossible to determine whether or not this impression was intentional.

Vessel 94

One rim sherd represents this vessel.

The blocky paste contains a heavy quantity of grit temper particles measuring 0.8 to 3.5 mm across. The exterior and interior surfaces are smooth.

The rim profile is unassignable. Lip thickness ranges from 6.1 to 6.6 mm, and the lip has a slight exterior overhang. The lip surface is flat and smooth with no decoration.

On the rim of the vessel is a remnant of a left oblique incision or impression. It is so small and incomplete that the tool used to create it cannot be distinguished.

Vessel 95

Three rim sherds, including two that are conjoinable, represent this vessel.

The compact paste contains a heavy quantity of sand and grit temper particles ranging in size from 0.4 to 1.5 mm. The interior and exterior surfaces of the vessel are smooth.

The rim profile of this vessel is unassignable. The 8.1 to 9.5 mm thick lip has a slight exterior bevel.

Right oblique dentate impressions decorate the lip surface. These impressions are 1.1 mm wide with an average tooth length of 2.2 mm. The rows are spaced 1.4 to 3.2 mm apart. The outer rim is decorated with 7.9 mm long, vertically oriented fingernail impressions. These are situated 5.6 mm below the outer lip edge and are spaced 8.3 to 10.2 mm apart.

Vessel 96

Five rim sherds represent this vessel.

The somewhat blocky paste contains tiny flecks of mica and a medium amount of sand and grit temper particles ranging from 0.7 to 3.0 mm across. Decorative elements obliterated the underlying surface treatment of the exterior surface. The interior of the vessel is smooth with several striations.

The rim profile is unassignable. The lip shape is square and has a flat 11.4 to 13.6 mm thick surface. The rim is 9.7 mm thick.

The lip is decorated with dentate impressions oriented in a right oblique direction. The rim is decorated with at least six horizontal rows of dentate impressions. The dentate impressions are 1.5 mm with an average tooth length of 2.5 mm.

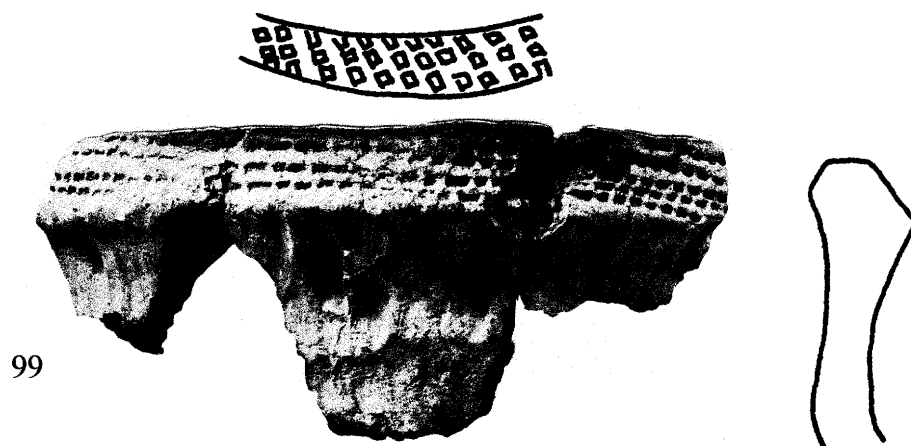
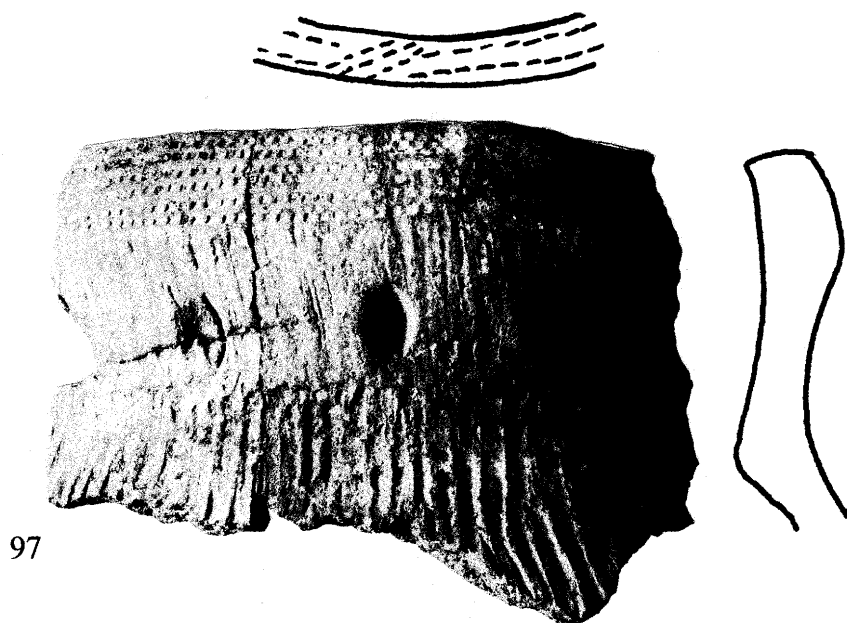
Vessel 97

Twenty-three sherds represent this vessel, and three large portions of the rim to neck/shoulder area have been reconstructed. A non-conjoinable portion of the shoulder is also represented. Approximately 55% of the rim is present.

The paste is very compact with tiny mica particles and a sparse quantity of sand temper particles measuring up to 2.0 mm across. The exterior of the vessel exhibits vertically oriented simple stamping. A thin encrustation of carbonized residue coats the vessel interior.

The vessel has a wedge rim profile. The diameter of the vessel orifice is approximately 14 cm. The 7.1 to 8.1 mm thick lip surface is flat. The neck is 8.4 to 9.8 mm thick. The thickness of the neck/shoulder area ranges from 3.8 to 6.7 mm.

The lip is decorated with faint dentate impressions that have been slightly smoothed. The orientation of the decoration varies from right oblique to horizontal.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

The area above the rim angle is decorated with six horizontal rows of dentate impressions. The dentates are 1.5 mm wide with an average tooth length of 1.6 mm. The rows are spaced 1.3 to 1.8 mm apart and extend 14.3 mm below the lip surface. The area below the rim angle is decorated with vertically oriented fingernail impressions placed approximately 20 mm below the lip. These impressions are 9.8 mm long and spaced 20 to 25 mm apart. The neck of the vessel bears impressions that were created by the edge of the paddle being pressed against it.

Carbonized food residue was removed from the interior of this vessel and submitted for AMS analysis. It yielded a date of 170 ± 40 rcybp (Beta-172176).

Vessel 98

Nine conjoinable sherds represent this vessel. An area extending from the lip to the neck/shoulder area has been reconstructed, and 50% of the rim is present.

This vessel is thin and well made, and the compact paste contains a medium amount of sand and grit temper particles measuring less than 2.0 mm across. The exterior of the vessel bears vertically oriented cord roughening. The interior is smooth with faint horizontal striations. A thin encrustation of carbonized residue coats the vessel interior and rim exterior.

The vessel orifice has a 10 cm diameter. The vessel has a wedge rim profile, and the flat lip surface is 4.0 mm thick and burnished. The distance between the lip and rim angle is 10.7 mm wide. The neck of the vessel is 5.6 mm thick, and the neck/shoulder area thins to 3.7 mm.

The area between the lip and rim angle is decorated with three horizontal rows of dentate impressions. Each row is 1.3 mm wide with an average tooth length of 2.4 mm. Each row of dentates is spaced about 0.8 mm apart. Directly below the rim angle are left oblique dentate impressions extending 8.5 mm below the rim angle. Below these left oblique impressions is a row of shallow, circular stamps with a 6.5 mm diameter. The stamps are evenly spaced about 8.4 mm apart. Below these stamps in the rim/neck area there are seven horizontal rows of dentate impressions. The dimensions of all the dentate impressions are the same as those listed above. One section of the rim has a pulled area where the lip was pulled to the exterior. This may be unintentional because it occurs only once on these sherds which represent 50% of the rim.

Vessel 99

Seven sherds represent to this vessel. An area extending from the lip to the neck/shoulder is reconstructed.

The paste texture varies from compact to slightly laminated and contains a sparse quantity of sand and grit temper particles measuring up to 1.6 mm across. Tiny flecks of mica are also visible in the paste. The exterior of the vessel exhibits smoothed vertically oriented cord roughening. An encrustation of carbonized residue coats the lip and interior surfaces.

The diameter of the vessel orifice is 10.5 cm. This vessel has a wedge rim profile with a flat 8.4 to 9.6 mm thick lip. The distance between the lip and rim angle is 12.5 mm. The rim is 6.8 mm thick. The neck is 7.1 mm thick.

The lip surface is decorated with left oblique dentate impressions. The area above the rim angle is decorated with five horizontal rows of dentate impressions. The dentates are 1.3 mm wide with an average tooth length of 2.0 mm. The rim is decorated with teardrop shaped stamps. The stamps are 13.1 mm long, 3.5 mm wide and spaced 12.3 to 14.7 mm apart.

Vessel 100

Thirty-five sherds, including many that are conjoinable represent this vessel. An area extending from the lip to the neck/shoulder area has been reconstructed, as have portions of the shoulder area.

This paste is usually compact, although some areas of the neck/shoulder are slightly laminated. The sparse grit temper particles range in size from 1.0 to 3.5 mm across. This vessel is heavily decorated, and the area below the shoulder bears check stamping that has been smoothed. A thin encrustation of carbonized residue coats the interior and exterior of the vessel.

The orifice diameter is 10 cm. This vessel has a wedge rim profile. The lip is 3.5 mm thick. The area above the rim angle is 12.7 mm wide. The shoulder angle is 7.6 mm thick. The neck is 6.4 mm thick. Below the shoulder the vessel thins to 3.3 mm.

This vessel is elaborately decorated. The lip is undecorated and burnished. The rim is decorated with right oblique dentate impressions. Below the rim angle are vertically oriented SET impressions that are 1.7 mm wide, 8.1 mm long, and spaced 2 to 5 mm apart. This portion of the rim with the SET impressions also has at least two drilled holes that were formed while the vessel was still wet. The placement of these on the circumference of the vessel cannot be determined because the vessel is not fully reconstructed. The drilled holes have a 4.9 mm diameter.

The rim and neck areas have been decorated with 17 horizontal rows of dentate impressions and in some areas of the neck the orientation of the dentate impression changes from horizontal to slightly right oblique. The pattern cannot be determined because the whole vessel was not complete enough to reconstruct. However, several sherds demonstrate a change in dentate orientation. The dentate impressions are 1.4 mm wide with an average tooth length of 1.9 mm. The shoulder angle is decorated with SET impressions 1.7 mm wide and 7.5 mm long. Directly below the shoulder angle are square check stamps that have been heavily smoothed.

Vessel 101

Eight sherds represent this vessel, and an area extending from the lip to neck/shoulder has been reconstructed. About 30% of the rim is present.

The compact paste contains a sparse quantity of grit temper particles ranging in size from 1.0 to 3.3 mm. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears smoothed check stamping. The squares are about 2.2 mm square. An encrustation of carbonized residue coats the lip and interior surfaces.

The orifice diameter is 13 to 14 cm. This vessel has a vertical rim profile with an expanding lip. The lip thickness ranges from 14.4 to 15.9 mm with a slightly rounded surface. The rim is 7.0 mm thick. The neck is 8.0 mm thick at its thickest point and thins to 6.0 mm in the neck/shoulder region.

The lip surface is decorated with right oblique dentate impressions. Each row is about 0.9 mm wide with an average tooth length of 1.4 mm. The outer rim is decorated with teardrop shaped stamps and under these the check stamping is visible. The stamps are 4.4 mm wide, 11.9 mm long, and spaced 5.2 to 7.4 mm apart. The neck of this vessel is decorated with at least five rows of horizontally oriented dentate impressions. These dentate measurements are the same as those on the lip.

Vessel 102

Seven sherds, including several that are conjoinable, represent this vessel. The largest sherd extends from the lip to the neck/shoulder.

Paste texture varies from quite compact to slightly laminated and friable. The paste contains a heavy quantity of sand and grit temper particles measuring up to 2.8 mm across. The exterior of the vessel has been smoothed to the point that the underlying surface treatment can no longer be distinguished. The smooth interior exhibits fine, horizontally oriented striations.

This vessel has a vertical rim profile with a square lip. The flat lip surface is 8.6 mm wide. The rim is 8.2 mm thick. The neck is 9.6 mm thick.

The lip is decorated with right oblique dentate impressions. The rim is decorated with two horizontal rows of dentate impressions. The neck is decorated with at least three horizontal rows of dentate impressions. All of the dentate impressions are 1.1 mm wide with an average tooth length of 2.1 mm.

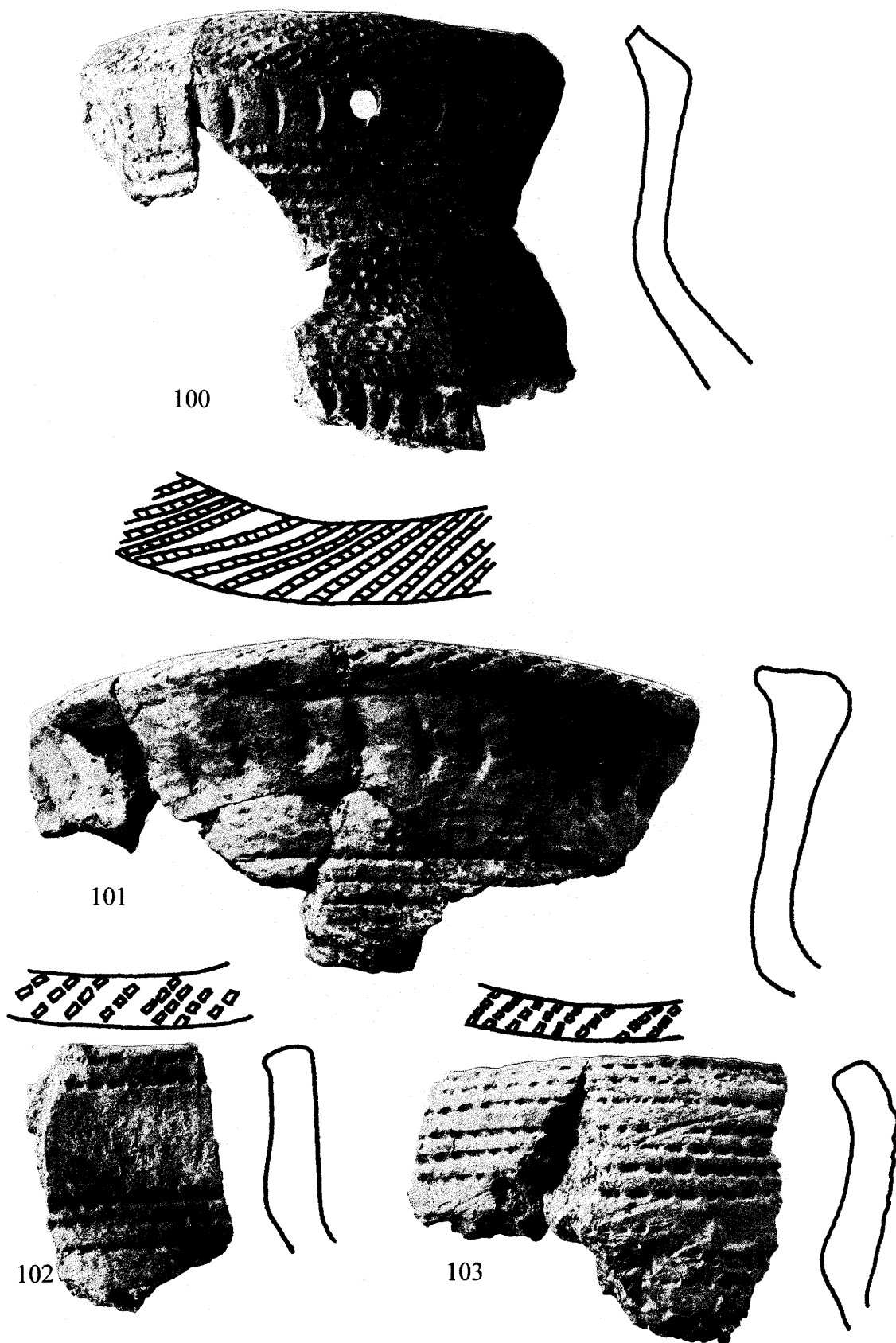
Vessel 103

Eight sherds represent this vessel. Two large sherds are conjoinable and form an area extending from the lip to the neck.

The compact paste contains a sparse amount of sand and grit temper particles measuring less than 2.0 mm across. Tiny flecks of mica are visible in the paste. The exterior surface finish is indeterminate. A thin encrustation coats the smooth interior.

This vessel has a vertical rim profile, but the lip curves slightly inward. The lip shape is flat and 6.8 to 7.0 mm thick. The rim of the vessel is between 7.8 and 8.3 mm thick, and the neck is 8.6 mm thick.

The lip is decorated with right oblique dentate impressions. The rim bears seven horizontal rows of dentate impressions. At least four rows of horizontal dentate impressions decorate the neck. The dentates on this vessel are 1.0 mm wide with an average tooth length of 2.2 mm.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 104

Nine rim sherds, including many that are conjoinable, have been assigned to this vessel. About 50% of the rim is present although not in a continuous section.

The paste varies from compact to laminated and contains a sparse quantity of grit temper particles measuring less than 1.5 mm across. Tiny flecks of mica are also visible in the paste. The exterior surface bears vertically oriented cord roughening that has been heavily smoothed. A thin encrustation of carbonized residue coats the interior.

The vessel orifice has a diameter of 13 cm. This vessel has a wedge rim profile and a 7.0 mm thick, flat lip surface. The distance between the lip and rim angle is 14.6 mm. The rim of this vessel thins to 5.1 mm.

Right oblique dentate impressions decorate the lip surface and the area between the lip and rim angle. The dentates are 1.5 mm wide with an average tooth length of 2.1 mm.

Vessel 105

Fifteen rim sherds represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.5 to 3.5 mm. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears heavily smoothed vertically oriented cord roughening. An encrustation of carbonized residue coats the lip surface and smooth interior.

The orifice diameter is 20 to 21 cm. The vessel has a vertical rim profile, and the lip is expanding with an interior bevel. The 16.2 to 18.9 mm thick lip is much thicker than the rim which is only 5.5 to 6.3 mm thick.

Vertically oriented dentate impressions decorate the lip surface. The impressions are 1.5 mm wide with an average tooth length of 2.3 mm. The outer lip edge is decorated with SET impressions that extend onto the rim. These impressions are 5.0 mm long and spaced 6.1 to 10.4 mm apart.

Vessel 106

Thirty-three sherds, including many that are conjoinable, represent this vessel. An area extending from the lip to the neck/shoulder has been reconstructed, and approximately 60% of the rim sherds are present.

The paste texture varies from compact in the neck to blocky and laminated in some portions of the rim. The paste contains a medium amount of grit temper particles measuring 0.6 to 3.4 mm across. The exterior of the vessel bears vertically oriented cord roughening that has been somewhat smoothed leaving horizontal striations. Faint striations were created when the vessel interior was smoothed.

The diameter of the orifice is 17 cm. This vessel has an angled rim profile with an expanding lip that has an interior bevel. The 13.7 to 14.7 mm thick lip surface is flat. The distance between the lip and rim angle is 27 mm. The rim angle is 11.3 to 14.4 mm thick. The neck angle is 9.2 mm thick, and the neck/shoulder is 6.9 mm thick.

The lip surface is decorated with vertically oriented dentate impressions. Directly below the lip are four horizontal rows of dentate impressions. In some areas of the rim they are nearly obliterated by smoothing while in others they are not smoothed. Below the horizontal rows are columns of dentate impressions oriented in a vertical to slightly right oblique direction. All the dentate impressions are 1.1 mm wide with an average tooth length of 1.6 mm. Directly below the rim angle is a row of vertically oriented

finger pinches. At the top of each finger pinch is a short, 6.5 mm long, incision oriented in a right oblique direction.

Vessel 107

Nine rim sherds, including two that are conjoinable, represent this vessel.

The blocky paste contains a medium amount of sand and grit temper particles ranging in size from 0.8 to 4.5 mm. The underlying exterior surface finish is obliterated by smoothing. A thin encrustation of carbonized residue coats the smooth interior.

This vessel has a wedge rim profile. The flat lip surface is 9.4 mm thick. The area between the lip and rim angle is 15 mm wide.

The lip surface is decorated with right oblique dentate impressions. The area above the rim angle is decorated with three horizontal rows of dentate impressions. Each tooth is about 2.7 mm square.

Vessel 108

Two rim sherds represent this vessel.

The slightly blocky paste contains a medium amount of sand and grit temper particles measuring up to 2.1 mm across. The exterior surface treatment of the vessel cannot be determined because such a small portion of the exterior is present. The interior is smooth.

The rim profile is unassignable. The lip is expanding with an interior bevel. The flat lip surface is 10.7 mm thick. The rim narrows to 8.4 mm.

The lip is decorated with three horizontal rows of dentate impressions. These impressions are 1.4 mm wide with an average tooth length of 1.7 mm. The rim is decorated with small round edged tool impressions creating notches that are about 5.5 mm long and are placed directly below the outer lip edge. These impressions are 1.3 mm wide and spaced 3.3 to 5.3 mm apart.

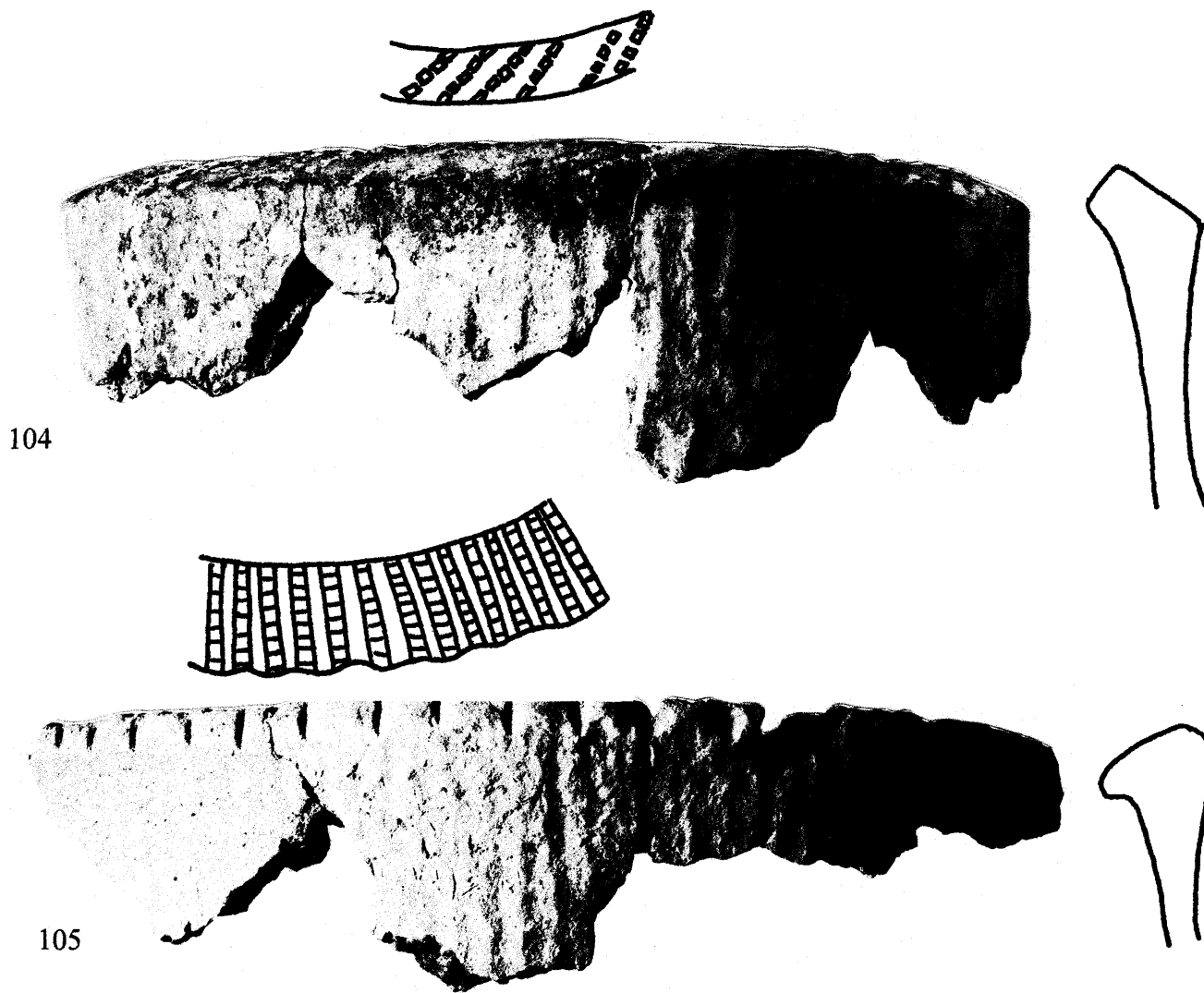
Vessel 109

Four rim sherds, including three that are conjoinable, represent this vessel.

The laminated paste contains a medium amount of grit temper particles ranging in size from 0.8 to 2.3 mm. Traces of the underlying check stamping remain on the heavily smoothed exterior surface. The interior is smooth.

The vessel has an orifice diameter of 14 cm. The vessel has a wedge profile. The lip thickness ranges from 7.2 to 8.2 mm, and the rim thins to 4.6 mm.

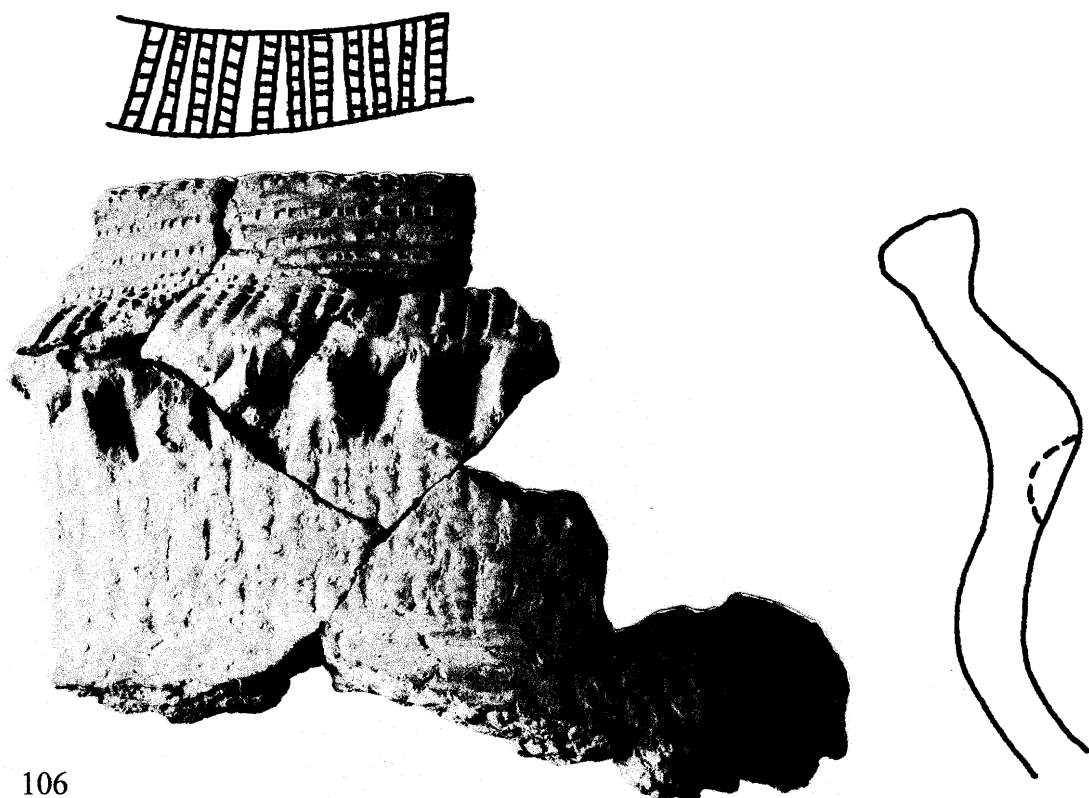
The lip surface is decorated with vertically oriented dentate impressions. These impressions are spaced 1.5 to 3.3 mm apart. The rim of the vessel is decorated with at least four horizontal rows of dentate impressions spaced 8.4 to 5.5 mm apart. The dentates are 1.5 mm wide with an average tooth length of 1.7 mm.



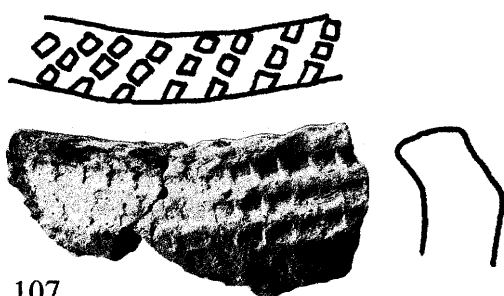
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Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).



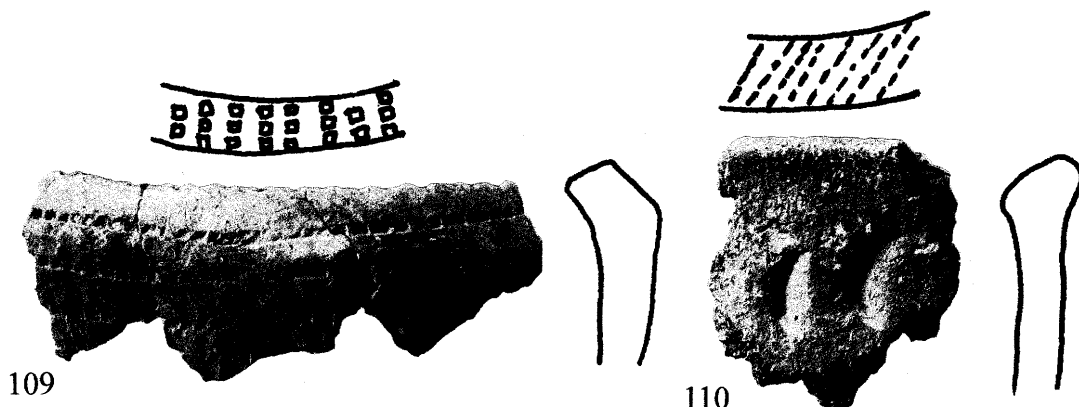
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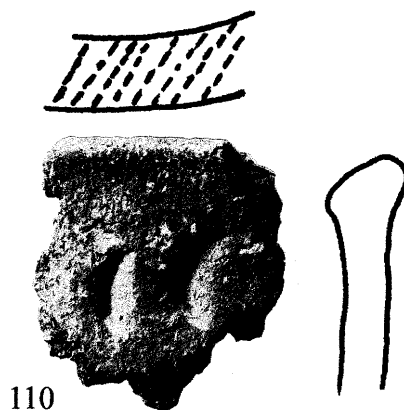
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Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 110

Six rim sherds represent this vessel.

The blocky paste contains a medium amount of sand and grit temper particles ranging in size from 0.5 to 3.9 mm, but most are very small. Smoothing obliterated the underlying surface treatment on the vessel exterior. A thin encrustation of carbonized residue coats the smooth interior.

The vessel profile is unassignable. The 9.3 to 11.2 mm thick lip is expanding with an interior bevel. The rim is 5.5 mm thick.

The lip is decorated with right oblique dentate impressions that are 0.8 mm wide with an average tooth length of 1.7 mm. The outer rim is decorated with vertically oriented fingernail impressions that are spaced 5.2 to 8.7 mm apart and placed 11.7 mm below the lip.

Vessel 111

This vessel is represented by one small rim sherd.

The blocky and slightly laminated paste contains a heavy quantity of sand and grit temper particles ranging in size from 0.5 to 2.4 mm. Very little of the exterior and interior surfaces are present, and the surface treatments indeterminate.

The rim profile is unassignable, but the lip has a square shape with a flat 10.0 mm thick surface.

The lip is decorated with right oblique dentate impressions. The impressions are 2.1 mm wide and each tooth is 2.8 mm long. This rim is decorated with a small ovoid stamp that is 6.0 mm wide and 2.9 mm long.

Vessel 112

Six small non-conjoinable rim sherds represent this vessel.

The compact paste contains a medium amount of grit temper particles ranging from 0.8 to 2.5 mm across. The exterior and the interior of the rim are smooth.

The profile of the vessel cannot be determined, but the lip shape is expanding with a slight interior bevel. The lip is 8.7 to 9.7 mm thick. Only a small portion of the rim is present, but it thins to 5.9 mm at 13 mm below the lip edge.

The flat lip surface is decorated with a series of shallow, BET impressions. Nothing can be said about the spacing of these impressions because the rim sherds are so small. The outer rim is decorated with at least two rows of horizontal dentate impressions. These impressions are very small, and each is only 0.5 mm wide with an average tooth length of 1.9 mm. The rows are spaced 4.75 mm apart.

Vessel 113

Three rim sherds represent this vessel.

The laminated and friable paste contains a heavy quantity of sand and grit temper particles measuring up to 2.2 mm across. The exterior and interior surfaces are smooth.

The rim profile is unassignable. The expanding lip is 9.3 to 9.5 mm thick. The rim thins to 7.7 mm thick.

The lip is decorated with right oblique dentate impressions. The dentate impressions are 1.9 mm wide with an average tooth length of 2.5 mm, and the rows are spaced 1.4 to 2.9 mm apart. The outer rim is decorated with shallow ovoid stamps that

are situated 7.0 to 8.4 mm below the lip edge. These stamps are 5.9 mm long and 3.5 mm wide.

Vessel 114

Three rim sherds, including two that are conjoinable, represent this vessel.

The paste texture is laminated, and the interior of two of the sherds is exfoliated. The paste contains a sparse quantity of sand and grit temper with one particle as large as 3.1 mm. The interior and exterior of the vessel are smoothed, and the interior is blackened from cooking residue.

The vessel has a wedge profile with a 5.7 mm thick, flat lip surface. The distance between the lip and the rim angle is about 13 mm. The area below the rim angle is 5.2 mm thick.

The lip is decorated with right oblique dentate impressions. The area above the rim angle is decorated with dentate impressions arranged in a chevron design. The dentate impressions are 1.7 mm wide with an average tooth length of 2.0 mm. The rows are spaced 0.8 to 2.3 mm apart.

Vessel 115

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles measuring 0.5 to 2.7 mm across. The exterior and interior surfaces are smooth.

The rim profile is unassignable. The lip has an expanding profile with a flat 8.1 to 10.7 mm thick lip surface. The rim is 7.1 mm thick.

The lip is decorated with shallow, right oblique dentate impressions. The impressions are 0.6 mm wide with an average tooth length of 1.9 mm. The rows are spaced 1.6 to 2.9 mm apart. The rim is decorated with a row of tiny punctates pressed in at an angle. The diameter of these punctates is 1.7 mm, and they are spaced 6.5 to 7.6 mm apart. Directly below these is a row of horizontally oriented dentates with the same dimensions as above.

Vessel 116

One rim sherd represents this vessel.

The slightly laminated paste contains a sparse amount of grit temper particles measuring 0.8 to 2.1 mm across. The exterior of the vessel exhibits vertical cord roughening. The interior is smooth.

This vessel has a wedge rim profile. The flat lip surface is 9.2 mm thick. The distance between the lip and rim angle is 10.8 mm.

The lip is decorated with left oblique dentate impressions. The area above the rim angle is decorated with dentate impressions in a chevron pattern. The dentate impressions on this sherd are 0.8 mm wide with an average tooth length of 1.8 mm.

Vessel 117

One rim sherd represents this vessel.

The paste is slightly laminated with splitting up the middle of the sherd. It contains a heavy quantity of grit temper particles ranging in size from 0.8 to 3.4 mm. The exterior of the vessel exhibits heavily smoothed check stamping. The check stamps are 2.0 mm square. The interior is smooth with striations from wiping the interior.

This vessel has a vertical rim profile. The lip shape is expanding with a flat, 9.1 mm thick surface. The rim thins to 6.0 mm.

The lip is decorated with right oblique dentate impressions. The impressions are 1.3 mm wide with an average tooth length of 1.9 mm. The rim bears a trace of a triangular stamp.

Vessel 118

One small rim sherd represents this vessel.

The blocky, exfoliated paste contains flecks of mica and a medium amount of grit temper particles ranging in size from 0.8 to 3.6 mm across. The exterior finish is indeterminate. The interior is exfoliated.

The rim and lip profiles are unassignable. The flat lip is 9.7 mm thick.

The lip surface is decorated with vertically oriented dentate impressions. The rim is decorated with at least two rows of horizontal dentate impressions. The dentate impressions are 1.5 mm wide with an average tooth length of 2.0 mm.

Vessel 119

One rim sherd represents this vessel.

The compact and homogeneous paste contains tiny flecks of mica and a sparse quantity of sand and grit temper. The one grit particle that is present measures 2.2mm across. The exterior surface treatment is indeterminate. The interior is smooth.

The rim profile is vertical. The lip shape is expanding with a rounded 10.3 mm thick lip surface. The rim thins to 5.0 mm

The lip surface is decorated with shallow, right oblique dentate impressions. The width is 2.2 mm with an average tooth length of 1.9 mm. The rim is decorated with left oblique dentate impressions that have been somewhat obscured by smoothing. Below these are vertically oriented round edged tool impressions. These are 11.2 mm long, 3.6 mm wide, and spaced 13.1 mm apart.

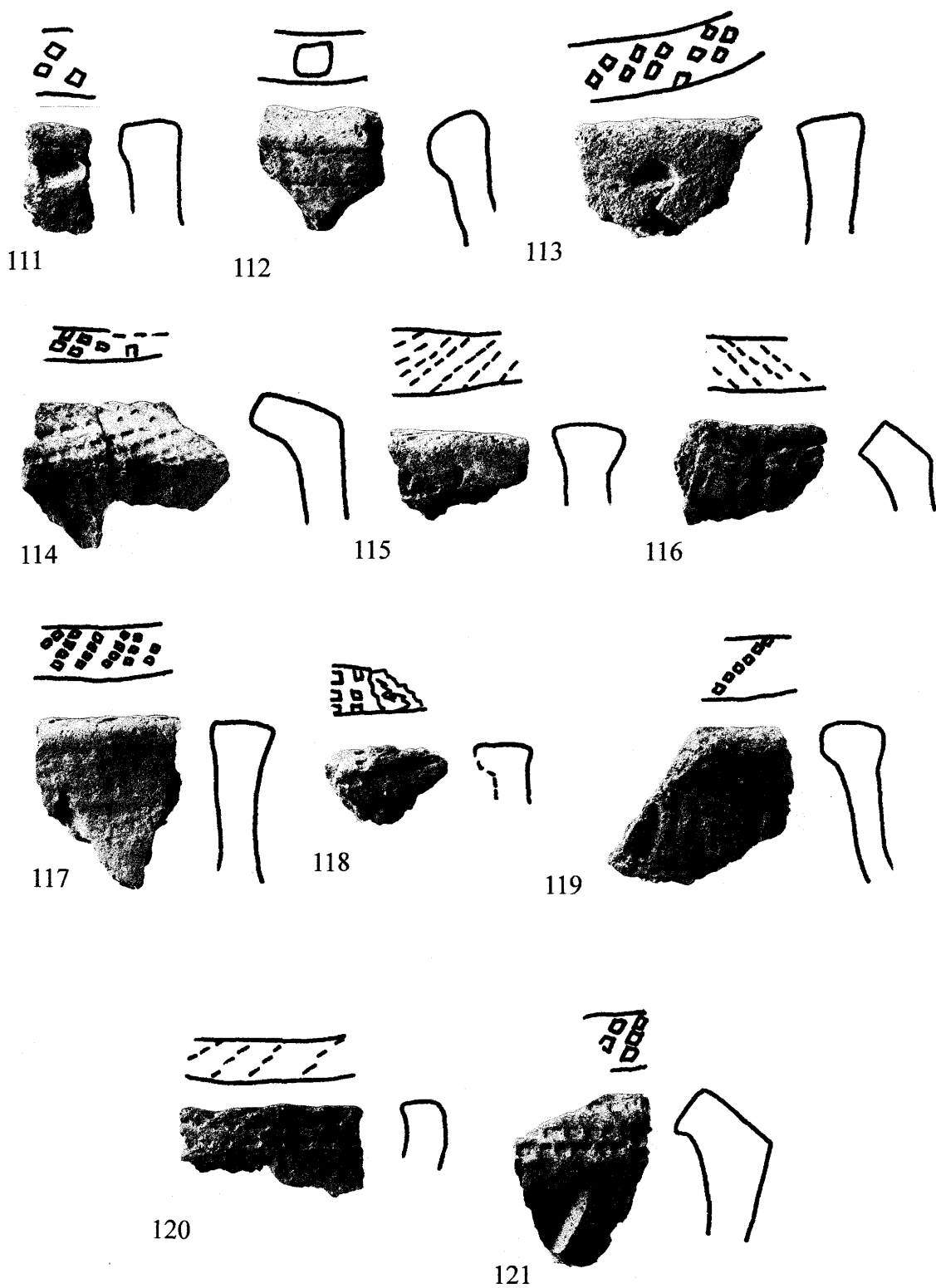
Vessel 120

Four rim sherds, including two that are conjoinable, represent this vessel.

This vessel is thin and compact with a medium amount of sand and grit temper particles measuring up to 2.1 mm across. The exterior surface finish is indeterminate, and the interior is smooth.

The rim profile is unassignable. The flat lip surface is 6.3 mm thick.

The lip surface bears right oblique dentate impressions. The rim is decorated with at least four rows of horizontal dentate impressions. The width of the dentates is 1.8 mm with an average tooth length of 2.0 mm.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 121

Two non-conjoinable rim sherds represent this vessel.

The compact paste contains a heavy quantity of grit temper particles ranging in size from 1.0 to 3.6 mm across. The exterior surface treatment is indeterminate. The interior of the vessel is smoothed.

The vessel has a wedge rim profile with an 8.7 mm thick, flat lip surface. The rim is 6.6 mm thick. The distance between the lip and rim angle is 13.3mm.

The lip surface is decorated with dentate impressions oriented in a slightly right oblique direction. The rim is decorated both above and below the rim angle. Above the rim angle are three rows of horizontal dentate impressions. The dentate impressions are 2.4 mm wide with an average tooth length of 1.7 mm. Below the rim angle one fingernail impression is present. The impression is 11.2 mm long and 4.3 mm wide.

Vessel 122

Nineteen sherds represent this vessel. Nine are conjoinable, and an area extending from the lip to the neck/shoulder has been reconstructed.

The vessel is compact with some slightly laminated areas in the rim. The paste contains a medium quantity of grit temper particles ranging in size from barely visible to as large as 6.1 mm across. The majority of the particles are quite small. Tiny flecks of mica are also present in the paste. The interior is smooth and exhibits fine horizontal striations. The exterior surface bears vertically oriented simple stamping. The edge of the paddle is visible in the neck area

The vessel has a wedge rim profile, but the rim angle has been somewhat obscured by the decorative treatment. The vessel has an orifice diameter of 10 cm. The surface of the wedge shaped lip is flat. Lip thickness ranges from 6.6 to 8.9 mm. The thickest area of this vessel is the 9.3 mm thick rim angle. The neck/shoulder area thins to 4.6 mm and is very compact.

Shallow, vertically oriented CWT impressions decorate the lip surface. Rim decoration consists of right oblique CWT impressions above a horizontally oriented groove that is situated along the rim angle. This groove is 5.2 mm wide and was created by dragging a round edged object through the plastic clay. Below this groove is another series of right oblique CWT impressions. The CWT impressions on the lip and rim are about 4.7 mm wide with four loops per centimetre.

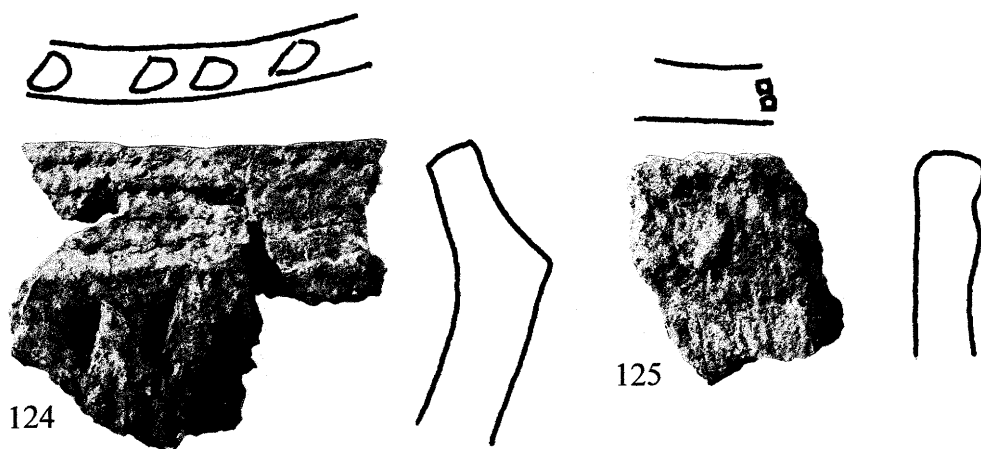
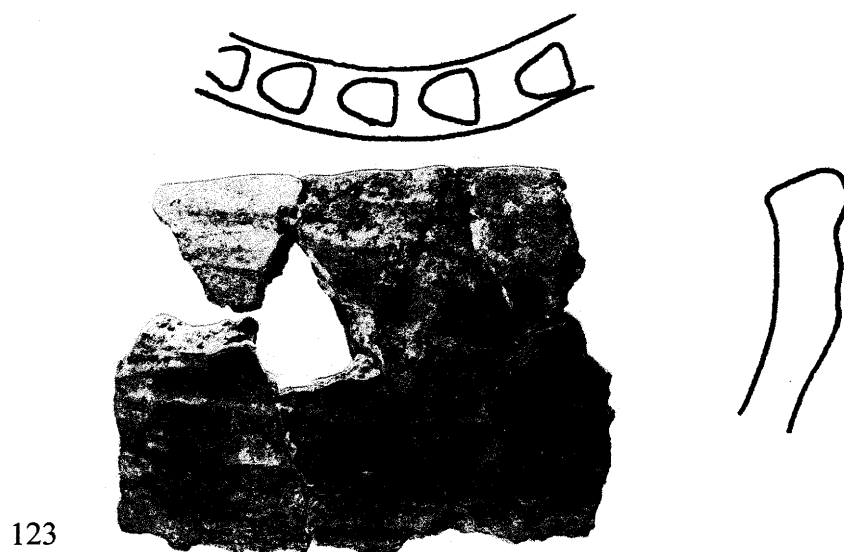
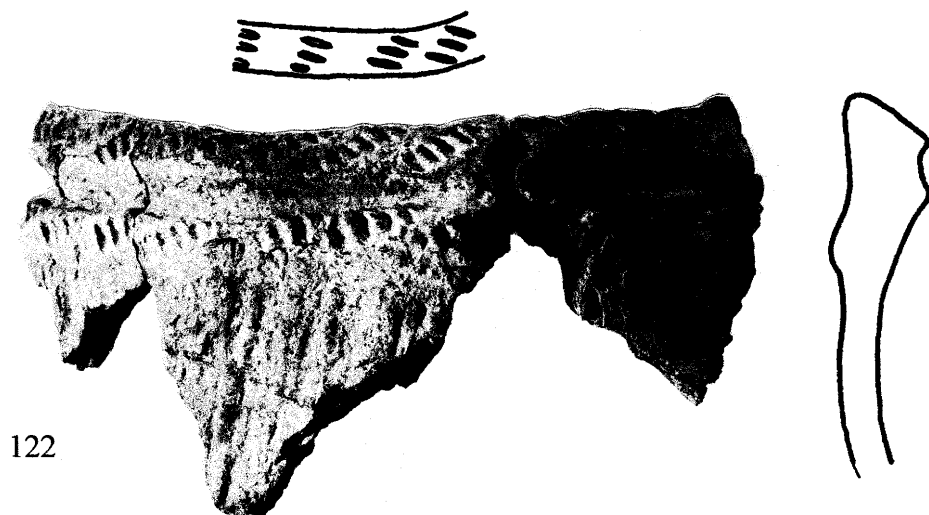
Vessel 123

Thirteen sherds represent this vessel. Many are conjoinable, and an area extending from the lip to neck has been reconstructed. About 25% of the rim is present.

The compact paste contains a medium amount of sand and grit temper particles ranging in size from 0.8 to 4.2 mm. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears horizontally oriented simple stamping. A thin encrustation of carbonized residue coats the smooth interior.

The rim has an S-profile, and the lip has an interior bevel. The flat lip is 8.7 to 9.1 mm thick. The rim is 7.2 to 7.7 mm thick. The vessel has a 16 cm orifice diameter.

The lip surface is decorated with semi-circular stamps. Similar impressions are also present on the rim 14 mm below the lip.



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 124

Eighteen rim sherds represent this vessel.

The laminated and friable paste contains a medium amount of grit temper particles measuring between 1.0 and 3.6 mm across. The exterior surface finish is indeterminate, and a thin layer of carbonized residue coats the smooth interior.

This vessel has a wedge rim profile. The smooth 7.0 to 7.5 mm thick lip has an interior bevel. The distance between the lip and rim angle is 19.2 mm. The rim angle is 13.2 mm thick, and the area below the rim angle is 9.7 mm thick.

Traces of right oblique SET impressions are present on the lip surface. The area above the rim angle is decorated with four horizontal rows of CWT impressions that have been somewhat obscured by smoothing. The impressions are 2.0 mm wide with three loops per centimetre. Below the rim angle are 8.5 mm long vertically oriented SET impressions. One of the rim sherds bears a portion of a drilled hole. It is situated directly below the rim angle and was made when the vessel was wet. Excess clay protrudes on the vessel interior.

Vessel 125

One rim sherd represents this vessel.

The highly laminated paste contains a medium amount of grit temper particles measuring between 1.5 and 3.0 mm across. A large split runs between the interior and exterior of the sherd. The exterior surface bears smoothed vertically oriented cord roughening, and the interior is smooth.

This vessel has an unassignable rim profile, and an 8.7 mm thick, rounded lip. The rim is 7.6 mm thick.

The lip surface bears a trace of an unidentifiable impression. The rim is decorated with left oblique CWT impressions extending from the outer lip edge 14.6 mm onto the rim. These impressions are 5.1 mm wide but have been obscured so that the number of loops per centimetre cannot be determined.

Vessel 126

Thirteen sherds represent this vessel. An area extending from the lip to the shoulder has been reconstructed, and approximately 50 % of the rim sherds are present, although not all are conjoinable.

The laminated and friable paste contains a heavy quantity of tiny sand and coarse grit temper particles measuring between 2.0 and 7.1 mm across. Tiny particles of mica are also present in the vessel paste. The exterior of the vessel exhibits check stamping that has been heavily smoothed to obliterated in some areas. The check stamps are about 3.5 mm square. The interior is uneven with shallow depressions in the body and shoulder areas.

The orifice has a diameter of 16 cm. The rim of the vessel is short and slightly excurve. The flat lip is 8.3 to 9.7 mm thick. The rim/neck is 8.7 mm thick. The shoulder of the vessel is 10.9 mm thick and has a slight angle.

The lip surface is decorated with variable cord and indeterminate impressions. The exterior and interior of the rim/neck is decorated with a cluster of poke marks in a circular pattern. The poke marks on the exterior of the vessel are in a larger cluster than the interior. The diameter of each poke mark is 1.6 mm. The spacing of these clusters of poke marks cannot be determined. The shoulder is decorated with shallow notches

created by impressing a BET into the vessel. These are 6.1 mm wide and spaced 5.5 to 7.5 mm apart

Vessel 127

Seven sherds, including six that are conjoinable, represent this vessel. An area extending from the lip to the neck is represented.

The compact paste contains a medium amount of grit temper particles ranging in size from 1.0 to 2.5 mm. The exterior of the vessel bears vertically oriented cord roughening with several horizontal lines created by the edge of the cord wrapped paddle. The interior exhibits several faint striations, and light carbonized residue coats the interior of two of the sherds. Several shallow depressions are present on the vessel interior.

The vessel orifice has a 16 cm diameter. This vessel has a vertical rim profile, and the lip is expanding with a rounded surface. The 12.4 to 14.3 mm thick lip is smooth and undecorated. The rim is 7.5 mm thick. The neck is 8.0 mm thick.

Two large holes were drilled through the rim when the vessel was dry, and there is a portion of one small hole that was drilled when the vessel was wet as is evidenced by the clay that was pushed through the hole and creating a ridge on the interior edge of the hole. One of the large holes and the small hole are incomplete. The small hole is situated 10.0 mm below the lip edge and the large holes are 16.0 mm below the lip edge. The complete large drilled hole has a diameter of 7.8 mm on the exterior of the vessel and 5.0 mm on the interior.

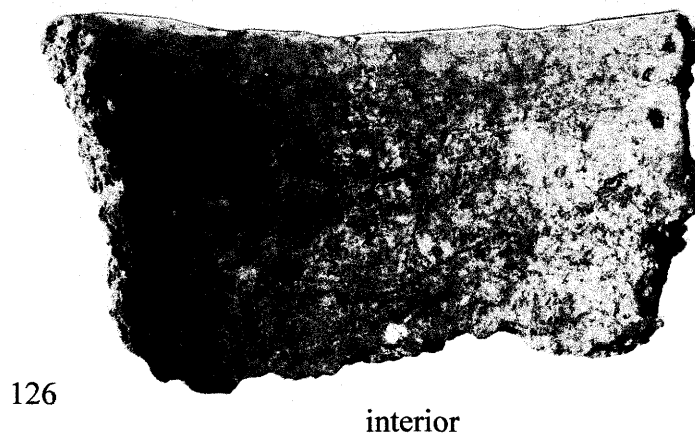
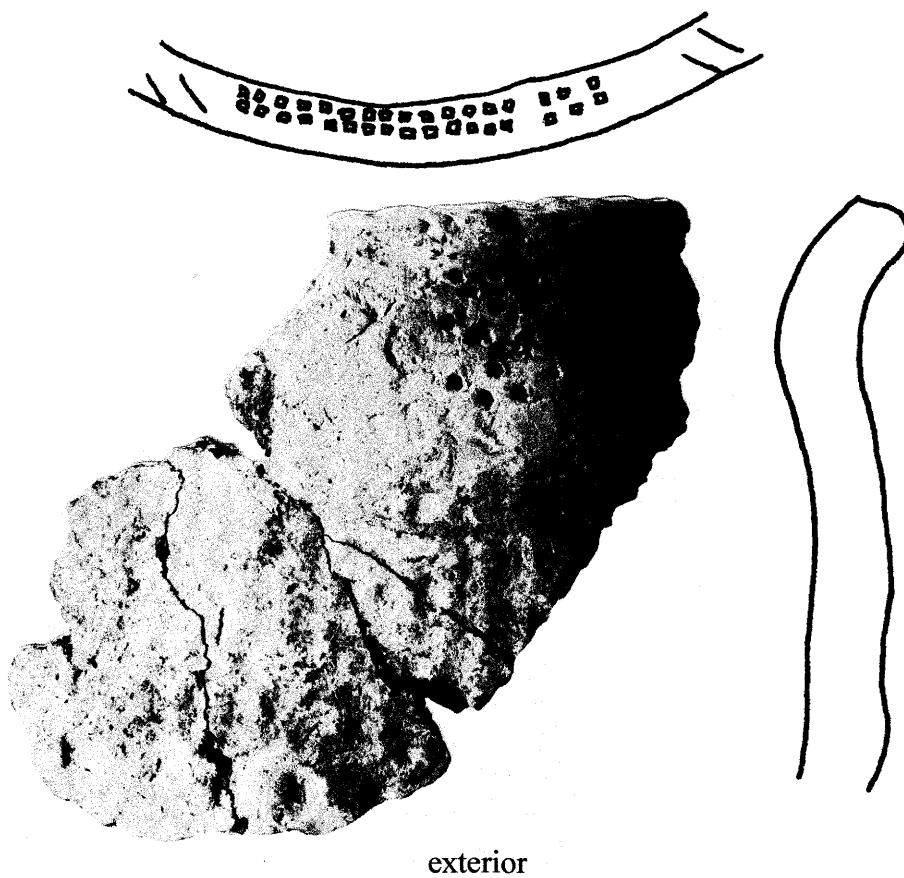
Vessel 128

Fifteen sherds represent this vessel, and about 50% of the rim has been reconstructed.

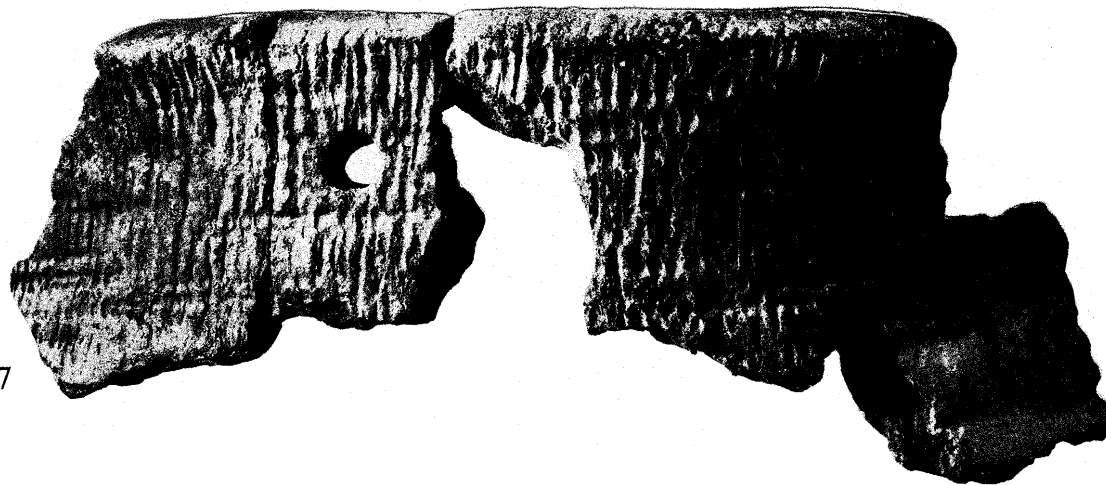
Most of the sherds are compact, but some exhibit slight lamination. The paste contains a medium amount of grit temper particles ranging in size from 1.5 to 3.0 mm. Tiny flecks of mica are also visible in the paste. The exterior of the vessel bears vertically oriented cord roughening. A thin encrustation of carbonized residue coats the interior.

The orifice diameter is 15 cm. The rim has a vertical rim profile with an expanding lip. The flat lip surface is 10.0 to 12.5 mm thick. The rim of this vessel thins to 6.2 mm.

The lip surface is decorated with teardrop shaped stamps. These stamps are 9.0 to 10.0 mm long, 5.8 mm wide, and placed directly beside each other around the lip surface. The rim is also decorated with shallow, teardrop shaped stamps that produced slight bosses on the vessel interior. The diameter of the stamps is 6.8 mm. They are placed in a horizontal row 20 mm below the lip and spaced about 25 mm apart.



Appendix C: Miry Creek Vessel (actual size, profile exterior to the right).



127



128

Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).

Vessel 129

Five conjoinable rim sherds represent this vessel, and an area extending from the lip to neck has been reconstructed.

The compact paste contains a sparse amount of grit temper particles measuring up to 2.0 mm across. The exterior surface treatment of the vessel is obliterated by decoration. An encrustation of carbonized residue coats the vessel interior and lip surface.

The orifice diameter is 11 cm. This vessel has a vertical rim profile, although the expanding lip is approaching a wedge profile. The flat lip surface is 13.0 to 16.1 mm thick. The rim is 7.3 mm thick, and the neck angle is 8.4 mm thick.

The lip surface is decorated with right oblique CWT impressions. Directly below the lip is a row of vertically oriented SET impressions. Each SET impression is 1.4 mm wide, 12.2 mm long, and spaced 3.6 to 4.6 mm apart. The rim and neck of the vessel are decorated with at least seven rows of horizontally oriented CWT impressions. It appears that the CWT impressions on this vessel were created by winding a fine cord around another cord or flexible object. The impressions are very fine and pressed evenly in a long row around the vessel. The impressions are 2.3 mm wide with five loops per centimetre.

Vessel 130

Five rim sherds, including two that are conjoinable, represent this vessel.

The blocky paste contains a heavy amount of grit temper particles ranging from barely visible to 5.8 mm across. The exterior surface treatment of the vessel is obscured by the decoration on the rim. The interior is smooth.

The rim profile is unassignable. The vessel has a square lip with a flat 8.3 to 10.0 mm thick lip.

The lip is decorated with right oblique CWT impressions. The rim of the vessel is decorated with at least two rows of horizontal CWT impressions. These impressions are 3.1 mm wide with four loops per centimetre.

Vessel 131

One rim sherd represents this vessel.

The blocky paste contains a sparse amount of grit temper particles measuring up to 2.0 mm across. The exterior of the vessel has been smoothed so that the underlying surface treatment is obliterated. The interior is smooth.

The rim profile is unassignable. The square lip is 8.4 mm thick.

The lip is decorated with faint right oblique CWT impressions. The impressions are 2.8 mm wide with an average of six loops per centimetre. The outer and inner lip edges bear randomly oriented CWT impressions.

Vessel 132

One rim sherd represents this vessel.

The compact paste contains flecks of mica and a sparse amount of grit temper particles measuring less than 2.0 mm across. Smoothing obliterated the underlying treatment on the exterior surface. The tiny portion of interior that remains is smooth.

This vessel has a wedge rim profile. The lip is flat and 8.6 mm thick. The area between the lip and rim angle is 13.3mm wide.

A portion of an impression is present on the lip. There is also a partial impression on the rim right below the rim angle. Both of these impressions appear to have been made by a BET or finger tip.

Vessel 133

One rim sherd represents this vessel.

The compact paste contains a medium amount of grit temper particles measuring between 1.0 and 2.7 mm across. The exterior of the vessel is burnished. There are fine striations on the interior of the vessel.

The rim profile is unassignable. The 9.5 mm thick lip has an interior flange.

The lip is decorated with 1.7 mm wide, vertically oriented round edge tool impressions. The rim bears a tiny indeterminate impression 5.0 mm below the outer lip edge.

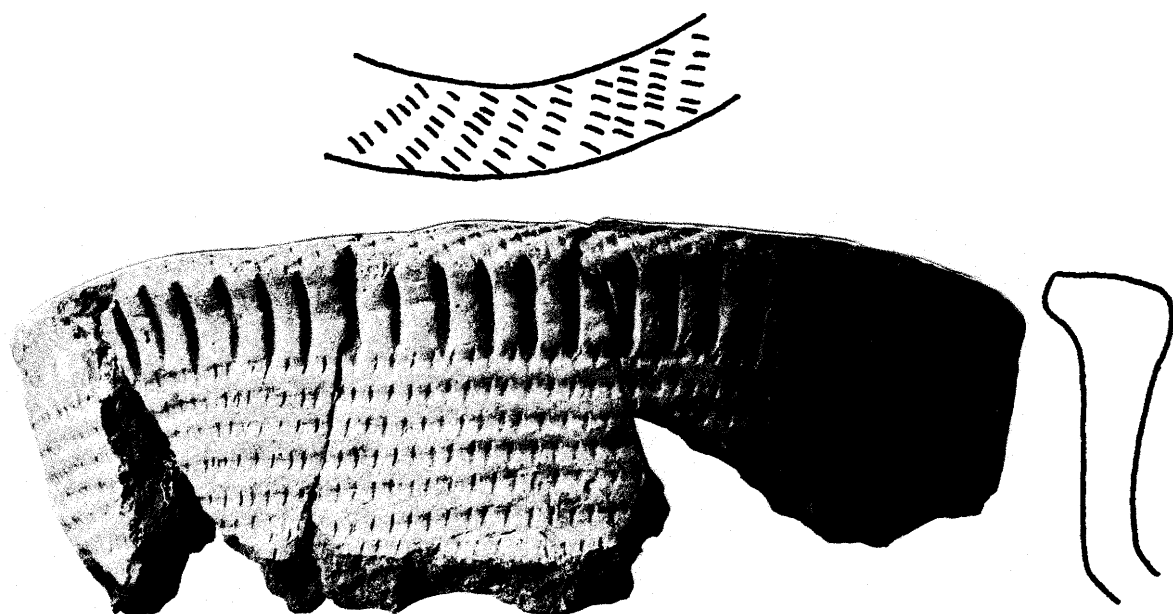
Vessel 134

One small rim sherd represents this vessel.

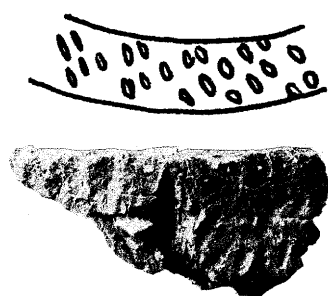
The slightly laminated paste contains a medium amount of grit temper particles ranging in size from 0.8 to 2.0 mm across. The interior and the exterior surfaces have been smoothed.

The rim profile is unassignable, but the lip is expanding with a flat, 10.9 mm thick lip. The rim thins to 7.4 mm.

On the lip surface there is a remnant of a BET impression. The rim has a portion of a gouge possibly created by a fingernail impression.



129



130



131



132



133



134



Appendix C: Miry Creek Vessels (actual size, profile exterior to the right).